

A retrospective assessment of 20th century thylacine populations

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ABSTRACT

The thylacine (*Thylacinus cynocephalus*) once ranged widely across Tasmania from the east to west coasts. The authors present the first comprehensive study to delineate the extent of the thylacine's post-1900 range, based on the retrospective analysis of 1167 geo-referenced capture, kill, and confirmed sighting reports, from 1900 to 1940. They examine the probable causes of population collapse, and discuss the possibility that the species survived into the 1940s and beyond.

Key words: Thylacine, *Thylacinus cynocephalus*, population, post-1900 range.

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Introduction

The thylacine (marsupial wolf, or Tasmanian tiger, *Thylacinus cynocephalus*) is the largest marsupial carnivore to have existed into modern times. Once widely distributed throughout Australia and New Guinea, the island of Tasmania afforded the thylacine a refuge from the forces that decimated its former range. The last known captive specimen, a male (Sleightholme, 2011), died at the Beaumaris Zoo¹ in Hobart on the night of the 7th September 1936.

The species is now listed as extinct under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), and under the International Union for Conservation of Nature (IUCN) Red List 2012 (McKnight, 2008^a). The thylacine was delisted from CITES Appendix I in accordance with Resolution Conf. 9.24 (Rev. CoP15) in March 2013.

Distribution

Historically, the thylacine ranged across Tasmania from the east to the west coasts. Harris (1808), in his original description of the species, states:

"It inhabits amongst caverns and rocks in the deep and almost impenetrable glens in the neighbourhood of the highest mountainous parts of Van Diemen's Land".

Guiler (1985, p.72) disagreed:

"The distribution of the thylacine bore no relation to altitude. They were found throughout the state, and, if anything, favoured the coastal plains and scrub. However, open savannah woodland was used extensively by

thylacines and they were not confined to the mountainous regions as was so frequently stated in the literature".

All published distribution maps [Guiler (1961, p.209), Dixon (1989, p.4), Guiler & Godard (1998, p.127), Paddle (2000, p.6)], are essentially based on the government bounty submission records. Collectively, they portray the far south-west of Tasmania as being devoid of any thylacine presence [Fig. 1]. In reality, this does not appear to have been the case. Bailey (pers. com., 11th May 2014 and 16th November 2014) states:

"Thylacines originally ranged over most, if not all of the Tasmanian mainland, the animal's tenure of certain areas largely governed by climatic conditions and terrain, and after white settlement by sustainable prey species. The apparent lack of thylacine activity in the far south, south-west of the state was due in part to the absence of human activity throughout the area; particularly during the years of the bounty system. This area had no townships as such, with a few localities on the south-western extremity being the only permanent form of human activity. The area then, much like it is today, was wild and isolated, with the only real incursion being mineral prospectors and the like. For a trapper to work these areas there needed to be a drop-off point for his skins and these were few and far between. The moment the early osmiridium miners arrived in the Adams River area they started seeing thylacines, and this tells us they were always there, but undiscovered. Fishermen told of observing thylacines walking along the coastal shores from their boats as they plied the many rocky outcrops dotting the shoreline. I'm not saying there was an abundant population, but there was certainly a thylacine presence".

¹ Queen's Domain site.

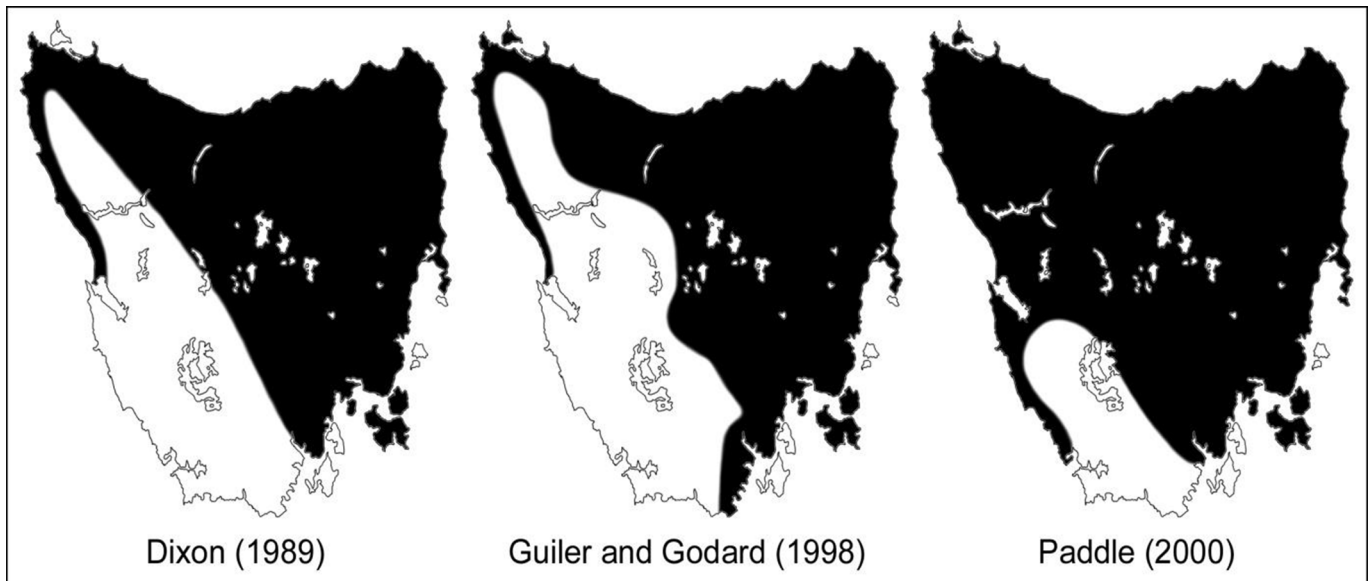


Figure 1. The thylacine's historical distribution (after Dixon 1989, Guiler & Godard 1998, and Paddle 2000).

Infrequent human incursions into the south-west certainly account for why so few thylacines were recorded, but other, more intrinsic factors operated to constrain thylacine numbers namely, climate and scarcity of game. Guiler (1961), states that:

"The greatest numbers of thylacines were caught in the driest parts of the state".

Rainfall typically exceeds 1600mm per annum in the far south / south-west and consequently, the area is unlikely to have been the preferred habitat of the thylacine. Laird (1947) attributed the coarse grasses of the region to the paucity of game, and this too would have undoubtedly restricted thylacine numbers:

"Marsupial food grasses diminish in area, quantity and quality as environment changes towards the remote regions of the west and south-west. Eastern food grasses are substituted by rank herbage wherein none but the toughest species survive. Such areas have never, held large quantities of game, and probably never will".

Historical reports from bushmen, prospectors, and explorers confirm Guiler and Laird's observations. The Quinn brothers² of Ellendale, all of whom were seasoned bushmen, state³:

"It is a recognised fact that this animal does not, from choice, inhabit that type of country. Old hands in our district maintain this to be so. Our own experience over many seasons of trapping in the remote western and south-western areas forces us to subscribe to this view. Some say that trappers are indirectly responsible for hastening the extinction of the tiger by killing out the game, thereby depriving it of food, (yet) you have a few thousand square miles of country that has never had a snare on it. You can't blame the snares if there are no tigers in that area, and we would say there are not. The scarcity of game is attributable solely to the lack of feed. Without feed no animal will thrive".

J. Mayher, an experienced prospector from Queenstown, declares⁴:

"I have prospected over most of the state and am satisfied the tiger does not inhabit this type of country".

The scarcity of game was a frequent observation in early 20th century exploration of the area:

"A systematic search of the surrounding country was made for game, but we were all very disappointed at the results. Practically no traces of game were encountered⁵".

"The game near the coastline was plentiful, but there was not much of it inland⁶".

The far south-west therefore, appears to have supported a small resident population of thylacines, primarily along its coastal fringes. Inland, the southern buttongrass plains supported few thylacines, and in all probability, this population would have been transient.

Population Decline

Guiler & Godard (1998, p.138) estimated that at the time of colonial settlement in 1803, the total thylacine population of Tasmania would have numbered between 2000 - 4000 individuals:

"Some parts of Tasmania did not support many, if any thylacines. The rain forests and sagelands, which account for almost half the surface area of the State, were not favoured tiger habitat. If this area is subtracted from the total area of the State, then the average home range of tigers in Tasmania would be reduced by about one half. The Woolnorth estimates suggest a home range per individual or pair of between 50 and 60 square kilometres, which would indicate a Tasmania wide thylacine population between 1357 and 1138 individuals, or double these two figures (between 2714 and 2276) if each home range sheltered a pair of tigers. Home ranges of less than 25

4 Mercury, 8th June 1946, p.21.

5 Huon Times, 19th July 1927, pp.3-4.

6 Mercury, 27th October 1928, p.13.

2 M. Quinn, C. M. Quinn & R. Quinn.

3 Mercury, 8th June 1946, p.21.

square kilometres would not have provided sufficient space for adequate food, shelter, breeding dens and other elements necessary to thylacine survival. Therefore, the conclusion is made that there were between 2000 and 4000 thylacines living in Tasmania in any one year, and would have been less rather than more”.

A significant decline in thylacine numbers occurred during the first decade of the twentieth century, with several factors cited as being responsible or contributing to this decline. An examination of each of these factors to assess its potential effect on thylacine numbers is therefore warranted.

Bounties

Following the introduction of commercial sheep farming into Tasmania in the 1820s, the thylacine was unjustifiably perceived as a vicious sheep killer, and relentlessly persecuted through a series of government and private bounty schemes. The government bounty ran from 1888 until its termination in 1908, although payments continued to be made into 1909. The Van Diemen's Land Company's (VDLC) two bounty schemes ran from 1830 until their termination in 1914, with a two year hiatus from 1838-1840. A number of local bounties ran in concert with the government bounty. The first analysis of the number of thylacines approved for government bounty payment was that undertaken by Guiler (1961). Over the 20-year period that the bounty was in force, Guiler states that 2,184 thylacines were killed, comprising 2040 adults and 144 juveniles. In a more recent study, Paddle (2012, Table 2, p.78) quotes a total of 2,209 thylacines killed, comprising 2,050 adults and 159 juveniles. Paddle's total for juveniles contained calculation errors for the years 1906 and 1907, and has been adjusted downwards to 156, reducing the total kill to 2,206. Over the same period, 81 thylacines were killed at the VDLC property at Woolnorth in the far north-west of Tasmania. Totals for the various local bounties are either incomplete or do not exist, but a conservative estimate of around 150 – 200 kills would be a reasonable assumption. Guiler (1961) states that 847 thylacines were presented for government bounty

between 1900 and 1908/⁽⁹⁾, comprising 769 adults and 78 juveniles, with mean annual submissions of 84.7 ± 16.73 (standard error) (range: 2–153) [Table 1]. Paddle's (2012) revised appraisal of claims for the same period quotes a total of 879 (n+32) kills, comprising 792 (n+23) adults and 86 (n+8) juveniles, with mean annual submissions of 87.8 ± 18.10 (standard error) (range: 2–168) [Table 2]. With both Guiler's and Paddle's assessments, two distinct phases are apparent [Fig. 2].

Stable cull [Phase A-B]

Guiler notes that between 1900 and 1904, the total number of thylacines submitted for bounty was 617, with an annual mean of 123. Paddle's estimate is 649 (n+32), with an annual mean of 130 (n+7).

Population collapse [Phase C-D]

Guiler notes that between 1905 and 1908/⁽⁹⁾, the total number of thylacines submitted for bounty was 230, with an annual mean of 46. Paddle's estimate is 229 (n-1), with an annual mean of 46. The observed reduction in thylacine kills of 63% is indicative of a sudden population collapse. Whether this steep decline reflected a comparable reduction in the population as a whole is unknown. If we accept Guiler's population estimates, the annual bounty yield prior to 1905 appears to have been sustainable at around 4-5% of the population, and in the absence of any other factors, was unlikely to have pushed the thylacine towards extinction. Guiler (1985, pp.26-27) states:

“The catch of thylacines under the bounty scheme was steady at about 100 per annum until 1905 when the number fell dramatically, reaching zero in 1910. The Woolnorth catches declined in the same fashion. This final decline, which was very rapid and occurred all over the state at about the same time, is not typical for a species that has been hunted to extinction. If the thylacine had been hunted to extinction, it is my view that it would be logical to expect the animal to disappear first from the places they had been most vigorously hunted since early settlement, but this did not take place.”

Table 1. Thylacines presented for government bounty annually between 1900 and 1908/(9) (After Guiler, 1961, p.24).

	Adults	Juveniles	Total
1900	138	15	153
1901	140	11	151
1902	105	14	119
1903	92	4	96
1904	82	16	98
1905	99	12	111
1906	54	4	58
1907	42	0	42
1908	15	2	17
(1909)	2	0	2
Totals	769 (91%)	78 (9%)	847

Table 2. Thylacines presented for government bounty annually between 1900 and 1908/(9) (After Paddle, 2012, p.78).

	Adults	Juveniles	Total
1900	138	15	153
1901	157	11	168
1902	112	18	130
1903	85	3	88
1904	93	17	110
1905	101	15	116
1906	42	1	46 [43]
1907	47	4	49 [51]
1908	15	2	17
(1909)	2	0	2
Totals	792 (90.2%)	86 (9.8%)	879 (878)

[] Adjusted totals

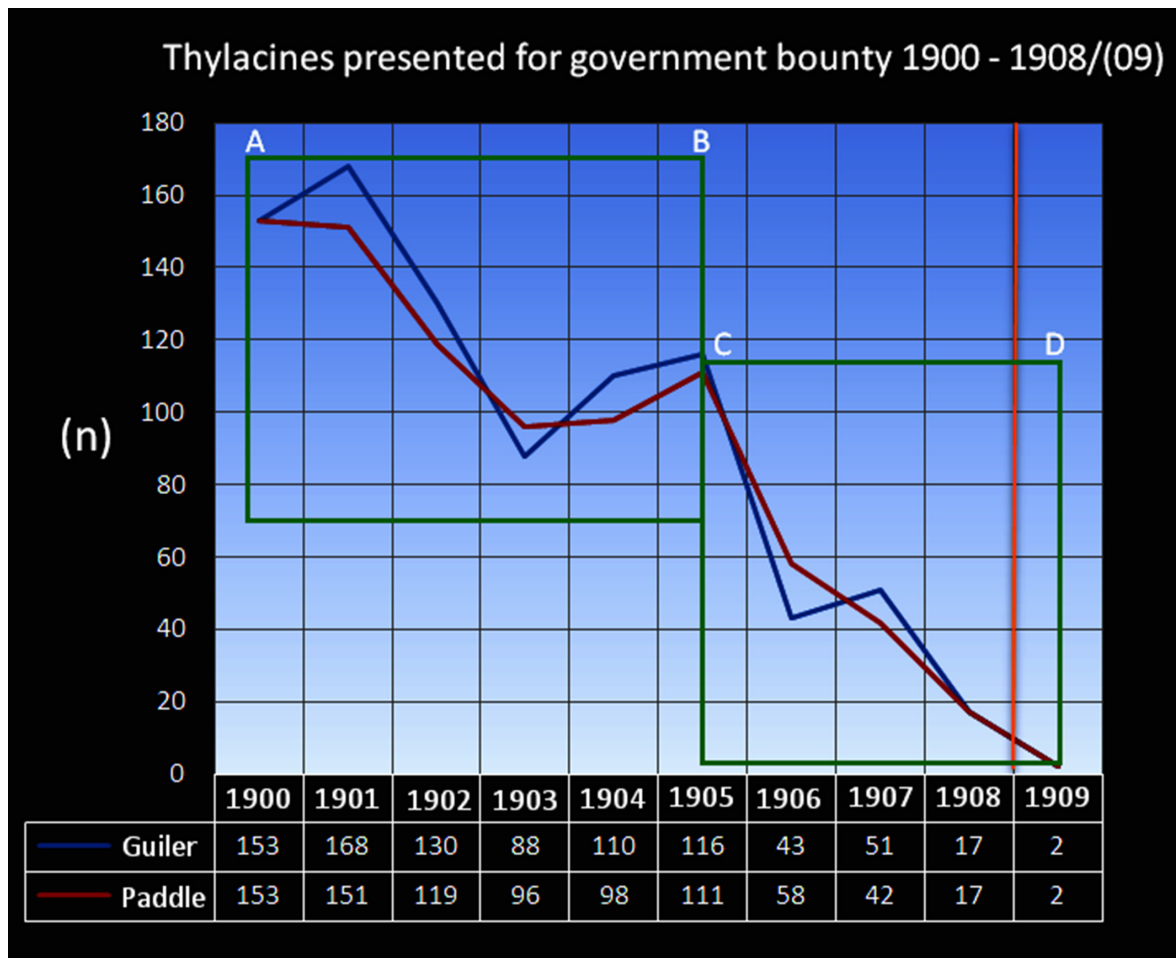


Figure 2. Comparative assessments by Guiler (1961) and Paddle (2012) of the thylacines presented for government bounty between 1900 and 1908/(9). Orange line marks the official termination of the bounty in 1908. Totals corrected for Paddle for 1906 and 1907.

Guiler (1961, p.209) states that a total of 37 thylacines were killed at the VDLC Woolnorth property between 1900 and 1914 [Table 3], with mean annual submissions of 2.46 ± 1.38 (standard error) (range: 0–19). The majority of kills occurred between 1900 and 1903. Paddle (2012, p.77) notes an additional 6 thylacines killed or captured at Woolnorth for 1909, but excludes the 3 kills Guiler records for 1914. Numerical discrepancies aside, a comparable population decline to that suggested by the government bounty returns is observed. Guiler (1985, p.24) asserts: “It must be emphasised that this total (government and VDLC bounties combined) by no means represents the total kill”, implying that this would have been significantly higher. The authors contend that as the thylacine survived throughout the bounty period, a kill rate decidedly greater than that of the bounty rate is improbable, as this would have resulted in an early extinction. Bulte et al. (2003) concur. The team constructed a bio-economic model which re-evaluated the bounty records. They concluded that the thylacine could not have been driven to extinction by the bounty schemes, and that a viable population of no less than 632 animals would have survived well into the twentieth century.

Of the 800 government bounty records accessed for this paper for the period 1900-1908/(9), 79 (9.3%) had no place of capture recorded, and 6 (0.7%) had no record of the number of thylacines submitted. We have made

Table 3. Annual thylacine kills at the VDLC property at Woolnorth (1900-1914). After Guiler (1961), and Paddle (2012) [in brackets].

Year	Total
1900	19
1901	9
1902	3
1903	2
1904	0
1905	0
1906	1
1907	0
1908	0
1909	0 (+6)
1910	0
1911	0
1912	0
1913	0
1914	3 (-3)
Total	37 (40)

the assumption that at least one thylacine was presented for bounty in these six instances. There is no dissection of the bounty record into males or females, so the sexual ratio of the claims is unknown. We assigned each of the 721 submissions noting the locality of capture to one of nine geographical regions based on Orchard's (1988) natural regions map for Tasmania: [TEC] - East Coast, [TSW] - South West, [TCH] - Central Highlands, [TNW] - North West, [TBL] - Ben Lomond, [TNE] - North East, [TWC] - West Coast, [TFV] - Florentine Valley and [TML] - Midlands [Fig. 3].

The four regions with the highest number of bounties were the East Coast [TEC] (184), Midlands [TML] (151), North West [TNW] (132), and Central Highlands [TCH] (117). The West Coast [TWC] produced the lowest number of bounties, with only 3 submissions recorded [Table 4].

Guiler states that 258 thylacines were submitted for bounty in the Central Highlands between 1900 and 1908, but many of the place names he assigned to this area are not geographically within the highland region. This was equally true for other areas, and produced a somewhat skewed picture of where the main centres of population were located. The disparities between Guiler's totals and those of the authors are therefore in the geographical assignment of the bounty claims.

The greatest yields of thylacines came from Dee Bridge (24), followed by Stanley (17), Ross (16), Ringarooma (15), Fingal (14), and Derwent (9). All regions experienced a similar population decline from 1905 to 1908⁽⁹⁾, with the Central Highlands [TCH] recording no submissions from 1906 onwards. While the total number of thylacines presented for bounty fluctuates between years, the marked overall reduction in kills over the eight years to 1908/⁽⁹⁾ provides compelling evidence of a sudden population decline right across the state [Fig. 4]. Maynard & Gordon

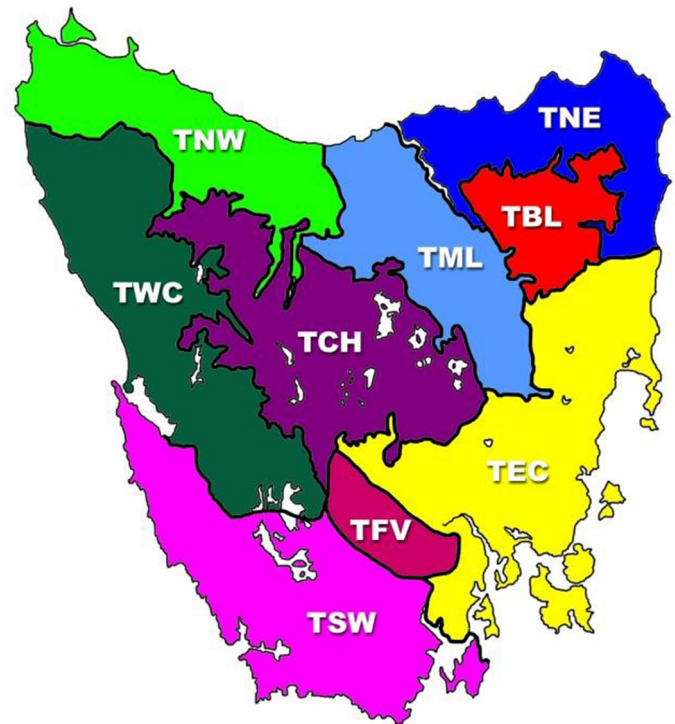


Figure 3. Regional map of Tasmania (modified after Orchard 1988).

(2014) argue:

“The drop in claims does not necessarily directly show the thylacine population crashing. Instead, it may reflect a change in the supply and demand for thylacines. It is likely that the annual catches continued to average 111 per year beyond 1900, but the hunters were taking their catches elsewhere”.

The authors disagree, as there is no evidence within museum or zoo records to suggest that this was the case.

Table 4. Regional breakdown of government bounty submissions (1900-1908/⁽⁹⁾) (n=800). Includes post-termination submissions for 1909.

Regions											
Year	TEC	TSW	TCH	TNW	TBL	TNE	TWC	TFV	TML	Totals	NL
1900	50	2	17	41	2	9	0	1	20	142	10
1901	20	2	28	31	1	10	0	3	27	122	12
1902	36	0	26	13	3	18	0	0	24	120	9
1903	12	0	11	14	5	9	0	3	22	76	10
1904	19	0	23	9	3	15	0	1	23	93	17
1905	28	1	12	18	2	20	1	2	24	108	7
1906	6	6	0	2	5	2	0	0	8	29	4
1907	9	2	0	1	1	0	0	2	1	16	6
1908	2	1	0	3	1	1	2	1	2	13	4
[1909]	2	0	0	0	0	0	0	0	0	2	0
Totals	184	14	117	132	23	84	3	13	151	721	79
Range	2-50	0-6	0-28	0-41	0-5	0-20	0-2	0-3	0-27	2-142	
Mean	18.4	1.4	11.7	13.2	2.3	8.4	0.3	1.3	15.1	72.1	
SD	15.72	1.83	11.42	13.68	1.70	7.53	0.67	1.16	10.97	52.52	

NL - No locality recorded in bounty records.

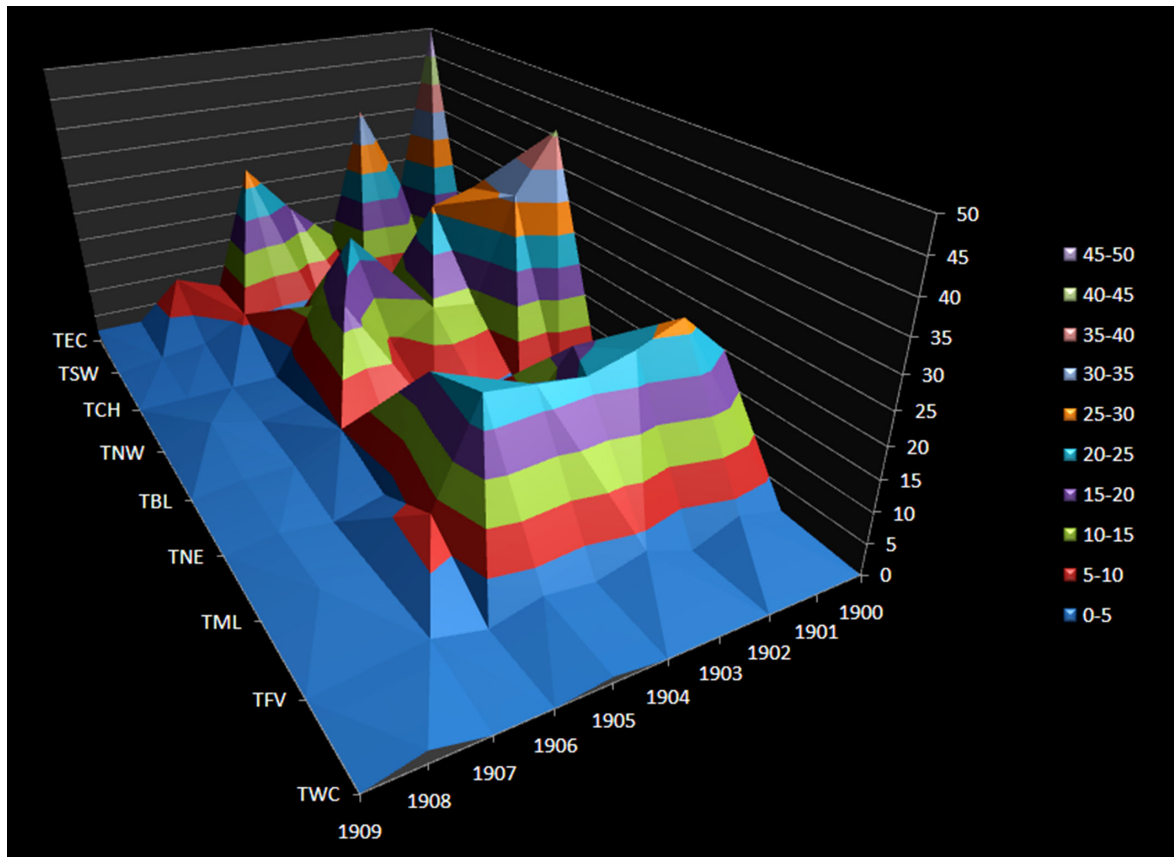


Figure 4. Topographical illustration of government bounty submissions by region (1900-1908/⁽⁹⁾) (n=721). Includes post-termination submissions for 1909.

The known live captures for zoos for the period 1900 to 1933 account for 125 thylacines, with an annualised mean of approximately 4 per year. Upon their deaths, most of these captive thylacines ended up as specimens within museum and university collections. Excluding specimens from zoos, a total of 51 specimens (where the accession date is known) are listed within the International Thylacine Specimen Database as entering collections between 1900 and 1933 (Sleightholme & Ayliffe, 2013). These combined totals fall far short of the average 111 catches per year as cited by Maynard & Gordon.

Disease

Guiler (1961) attributes disease as the most likely cause of the population decline:

"The sudden drop in the number of thylacines killed together with the fact that the animals were not hunted out of the earliest settled areas points to a disease rather than to hunting. The peak in population adds to this view and it should be noted that there is a close correlation between the Government and Van Diemen's Land Company records in this regard. The importance of habitat alteration should not be disregarded in assessing the decline of the species, but the view that hunting was the sole factor cannot be accepted".

Paddle (2012) concurs, and provides supporting evidence from contemporary zoo records. Prowse et al. (2013) disagree, arguing that disease played little part in the population collapse, and that the decline in thylacine

numbers was down to the actions of man⁷:

"We tested this claim by developing a 'metamodel' – a network of linked species models that evaluated whether the combined impacts of Europeans could have exterminated the thylacine, without any disease. The new model simulated the direct effects of bounty hunting and habitat loss and, importantly, also considered the indirect effects of a reduction in the thylacine's prey – kangaroos and wallabies due to human harvesting and competition from millions of introduced sheep. We found we could simulate the thylacine extinction, including the observed rapid population crash after 1905, without the need to invoke a mystery disease."

There is inherent uncertainty in the construction of population viability analyses (PVAs), and therefore, care should be exercised in their interpretation. This is especially so when working with minimal or nonexistent datasets. As no field studies were undertaken on the thylacine, its ecology was never documented. The accuracy of PVA declines substantially in such circumstances. Even with sufficient data, it is possible that a PVA can still have significant errors in extinction rate predictions. Ellner et al. (2002) concur:

"PVA has little value in such circumstances and is best replaced by other methods".

The Tasmanian Fauna Board acknowledged disease as the primary cause of the decline in thylacine numbers in an article printed in the *Mercury* of the 17th October 1934 (p.2):

⁷ <http://www.adelaide.edu.au/news/news58881.html>

"It was stated that the thylacine (Tasmanian tiger) was now quite extinct on the eastern side of the State, the species having been killed out by disease. There were still a few on the west, but they were dying out owing to lack of food. There were probably some in the southwest".

The Examiner of the 19th October 1934 (p.4) also reported:

"Experienced pastoralists were forced to throw up thousands of acres of magnificent sheep country because of the ravages of the tigers. But once again nature had taken a hand, and a disease which was a kind of mange appeared and cleaned the tiger out from most of the pastoral country. It was several years now since a single specimen had been seen in populated parts of the state".

Miller et al. (2009), in their study of the thylacine genome, demonstrated that ultra-low levels of genetic diversity existed within the thylacine population. This is consistent with a founder effect, and would have impacted on the thylacine's ability to resist disease. The unknown disease, often cited in the literature as "distemper" or being "distemper-like", decimated thylacine and other dasyuromorphian numbers. From contemporary bushmen's accounts, the disease first appeared in the late 1890s in the far north-east of Tasmania, and took around 5 to 6 years to spread from east to west coast populations (Bailey, C., pers. comm.). In the Advocate newspaper of the 10th February 1937, Alfred W. Burbury of the Animals and Birds Protection Board made the following comment when referring to the sudden collapse in thylacine numbers:

"If the animal was extinct, it was through disease. The last few caught some years ago were suffering from some form of mange, which also had been responsible for the destruction of many native cats".

Sharland (1971) concurs:

"The tiger's days were numbered when it contracted that dread disease – from settlers' dogs it is supposed".

Paddle (2000, p.203) states:

"In the wild it was anecdotally described as "distemper" or "mange"; and distressed individuals, exhibiting significant hair loss or scabs over the head or body, were easily killed, and when snared, frequently made little attempt to free themselves, and often died as a result of the additional trauma of capture".

Paddle's research on captive thylacines suggests the disease was episodic and debilitating, with symptoms varying depending on severity, rather than always having a fatal outcome. Bleeding skin lesions, together with hair loss to the body, limbs and tail were the outward manifestations found in both the mild and severe forms, with the extent varying according to severity. In the worst affected cases, loss of appetite and diarrhoea were also present. Paddle (2000, p.203) notes:

"These symptoms could persist for up to four days. On occasions when a captive animal survived a first bout of illness, it reoccurred at two to three month intervals".

The canine distemper virus (CDV) is an enveloped, single stranded, negative RNA virus of the family

Paramyxoviridae, genus Morbillivirus, which is closely related to the measles virus. There is no evidence to suggest that marsupials can contract CDV. Feline panleukopenia virus (FPV) or feline distemper is an entirely different disease to canine distemper, and is not transmissible to dogs or marsupials. Distemper in either its canine or feline form can therefore be eliminated as a cause of the epizootic disease. From Paddle's description of the symptoms, certain outward manifestations of the disease are those one would commonly associate with sarcoptic mange, a highly contagious infestation of *Sarcoptes scabiei canis*, a burrowing parasitic mite. The canine sarcoptic mite can also infest cats, pigs, horses, sheep and various other species. Marsupials known to be prone to infection include the Common wombat (*Vombatus ursinus*), Southern Hairy-nosed wombat (*Lasiorhinus latifrons*), koala (*Phascolarctos cinereus*), Agile wallaby (*Macropus agilis*) and Common Ringtail possum (*Pseudocheirus peregrinus*). The incubation period for clinical signs to develop is around 14 days, but can be as short as 24 hours in cases of re-infection. The mites burrow into the skin, causing intense itching resulting in scratching and biting. Scab formation and hair loss frequently appear first on elbows and ears. Secondary skin infection is common. Animals infected with sarcoptic mange are often emaciated and in poor condition. In advanced stages, sarcoptic mange has a devastating effect on internal organs, including the heart, liver, kidneys, lungs and reproductive organs. Mange can also have a negative impact on the reproductive capacity of infected animals (e.g., absence of lactation, reduced litter size and weight, and reduced pup viability and growth rates). Heavy infestations can also result in anaemia in the young. Pence & Ueckerman (2002) state:

"Although short term mortality may appear devastating, in a self sustaining population, mortality is non compensatory and a mange epizootic generally does not affect long term population dynamics. Alternatively, the net effect of mange epizootic can have serious consequences in remnant or fragmented populations of CITES listed, threatened, or endangered species where loss of even a few individuals can be critical to the survival or restoration of the species".

Endangered populations are unlikely to sustain an epizootic disease without the presence of a common host. Since mange is transmitted by direct or indirect contact, it is density dependent. As thylacine population densities in the wild were relatively low, one would assume that the impact of the disease would have been less severe than that experienced in captive stock. With sarcoptic mange, the intensity of mite infestation correlates with the severity of clinical signs seen in infested animals. Other diseases cited as a possible cause of the epizootic are viral pneumonia and toxoplasmosis. Guiler (1998, p.28) also notes that a type of pleura-pneumonia spread through the dasyure population in 1908-1909. It is entirely plausible, though not proven, that two pathogens were acting in concert, producing a combination of symptoms. Irrespective of the underlying etiology, the disease is known to have had a high mortality rate in captive stock. Paddle (2000, p.203) notes that the greatest loss to captive animals occurred at the Melbourne Zoo, where in the two-year period from 1901 to 1903, sixteen of the zoo's seventeen thylacines succumbed to the illness and died. This loss equates to a

mortality rate of 94%. Paddle states:

“Captive thylacine records suggest that some thylacines exposed to the disease never picked it up, whilst others experienced its effects only mildly or were naturally immune”.

This observation is important in that it demonstrates that there were levels of immunity within the thylacine population to the disease. Further research is required on museum specimens collected during the early part of the 20th century to establish the underlying cause. Until this is completed, attempts to identify the true nature of the disease are somewhat speculative.

It is of interest to note that the east-west progression of the epizootic disease in the thylacine virtually parallels the geographic spread of Devil Facial Tumour Disease (DFTD) in Tasmanian devils (*Sarcophilus harrisi*) as detailed by McCallum (2008).

The authors contend that the evidence provided by zoo and museum records, together with anecdotal recollections from bushmen, strongly support Guiler and Paddle's argument. The vulnerability of island species to disease, and the part this can play as a lever in the extinction process, is clearly demonstrated by the collapse in thylacine numbers observed in the bounty records. The extent to which the epizootic disease contributed to this collapse is not known, but it appears to have been a significant factor.

Habitat destruction

Extinctions are often caused by loss of habitat due to agricultural, industrial or urban growth. Colonial settlement in Tasmania was followed by intensive land clearance for agricultural use, in which large swathes of native vegetation were removed. Since 1803, the areas of greatest loss have been grasslands and grassy woodland⁸, the preferred habitat of the thylacine. The introduction of sheep onto the thylacine's former range, together with the concurrent removal of its native prey species, would inevitably have had a negative impact on thylacine numbers over time. Habitat loss, however, is unlikely to have been a major contributing factor in the sudden collapse in thylacine numbers, as even today there are substantial tracts of suitable thylacine habitat within Tasmania.

Feral dogs

Feral dogs were introduced into Tasmania by the early colonial settlers, and like the dingo on the mainland, would have competed with the thylacine for territory and available prey. Mooney (2014, p.39) states:

“Although feral dogs were locally common back then, they were largely restricted to areas near people and could not have competed for food with thylacines across the latter's range”.

Direct competition with dogs therefore, appears unlikely to have been a pivotal factor in the thylacine's decline. That said, the majority of sheep kills were made by feral dogs, and the thylacine frequently blamed for these kills.

⁸ Lowland Native Grasslands of Tasmania - A nationally threatened ecological community, Environment Protection and Biodiversity Conservation Act 1999, Policy Statement 3.18, p.2.

Such misguided incrimination undoubtedly played a key role in the instigation of the bounty schemes.

Wild animal trade

A small, but significant number of thylacines were caught for the wild animal trade. An estimated total of 125 thylacines were displayed in thirteen zoos⁹ from 1900 to 1936, the majority having been obtained from the wild, rather than from sales or exchanges between zoos. During the 19th century, this trade was sustainable, but would have had a negative impact on population numbers as the thylacine became increasingly rare. Despite the relatively large monetary sums offered for their capture, few thylacines were caught after 1925.

Hunting and the fur trade

There was a substantial fur trade in Tasmania, with vast quantities of animal skins exported to the mainland and overseas. Tasmania's colder climate produced higher quality skins that brought premium prices when auctioned at market. The total of possums, wallabies and kangaroos killed for the fur trade from 1923-25 amounted to some 2,359,950 animals¹⁰. The season when the fur was at its finest (June and July) corresponded to the time when almost every adult female has young in the pouch, so the final death toll would have been significantly higher. The Mercury of the 17th September 1926 (p.3) justifiably described the fur trade in Tasmania as a “systematic massacre”. The scarcity of game was a key concern of Arthur Reid, curator of the Beaumaris Zoo in Hobart. An article published in the Mercury of the 2nd June 1925 (p.2) states:

“[Mr Reid] returned on Saturday after a three weeks' visit to the North West and North East Coasts in search of fauna for the zoo. Just on 1,000 miles had been covered in the three weeks. Game everywhere was scarce with the exception of the far North West on the V.D.L Company's Woolnorth Estate. The Forester kangaroo was sought after, but not found. Some time was spent in the Gladstone district, and one day was devoted to a scour round Mount William, where these large marsupials were reported to be, but Mr Reid was not fortunate in being able to see one. Mr Reid was of the opinion that from next year the season for the taking of kangaroo should be closed for a period of three years”.

The absence of game was also noted by hunters in an article published in the Mercury on the 25th August 1931 (p.3):

“Hunters expressed an opinion last year that the season should be closed for 1931, and results prove the correctness of their opinion. Kangaroo and wallaby are becoming very scarce in bush country, and many years must elapse before they can recover there to any great extent”.

David Fleay, in an article in the Mercury of the 26th March 1946 (p.11), states:

⁹ Tasmania [Beaumaris (16), Hobart (29), Launceston (30^{Fst})], Australia [Melbourne (24^{Fst})], Adelaide (2), Moore Park (1) & Taronga (1)], Europe [Berlin (2), Cologne (2), Antwerp (1)], UK [London (7), Glasgow (1)], and North America [New York (4), Washington (5)]. In addition, 3 thylacines died on route to the London Zoo and 1 on route to the Bronx Zoo in New York.

¹⁰ Mercury, 17th September 1926, p.3.

"Over a great part of the Central West and on the West Coast he found the country almost denuded of game".

The significance of the fur trade with respect to depleting thylacine numbers was not directly in the number of thylacines killed, but in the unrestricted eradication of its prey species.

Trade in thylacines for museums

Substantial numbers of thylacines were killed, albeit indirectly, as specimen material for museums and universities. Sleightholme & Ayliffe (2013) state:

"A conservative estimate for the total number of thylacines procured for scientific collections [1805-1936] is approximately 450 ± 50".

In an interview with Sir Colin Mackenzie, Director of the National Museum of Australian Zoology (Canberra), published in the Mercury of the 24th September 1925 (p.6), he states:

"The British, French, and German universities were obtaining all the material they could lay their hands on before the final extinction of the Australian fauna".

Trade in scientific material intensified from 1900 onwards, and together with the demand for thylacines for zoos, would have impacted on thylacine numbers as the species became increasingly scarce.

Extinction levers

All of the aforementioned factors are deemed to be extinction levers or stressors, and collectively, or in some instances singularly, can push a species beyond the point of recovery. McCallum (2012) states:

"It is relatively unusual for infectious disease to be the sole cause of endangerment for a species. In most cases, there will be multiple stressors contributing to decline, such as habitat destruction and fragmentation or overexploitation".

It is probable therefore that a combination of stressors, acting in unison, brought about the sudden collapse in thylacine numbers, with the epizootic disease providing the catalyst to accelerate this decline.

Concerns over Decline

Concerns over the sudden decline in the thylacine population were expressed by many leading zoologists and naturalists of the day [McGowan¹¹, Pearson¹², Roberts¹³, Le Souëf (1907), Flynn (1914), Lord (1919), Fleay¹⁴, Stead¹⁵, Sharland¹⁶]. Dennis Colbron Pearce, President of the Field Naturalists Club of Tasmania, summarised the prevailing sentiment in an article in the Mercury of the 4th January 1937 (p.6):

"Are we going to sit down quietly and allow this unique animal to die out within a short period? Something must

be done and done quickly if we wish to avoid the slur which is bound to fall upon us by its extinction. If every interested person, and everyone should be interested, voiced his and her opinion we might get a move on in the right direction and win the approbation of the world for our efforts in saving the thylacine".

G. W. Morey, writing in The Field¹⁷, was more forthright:

"Unless something is done, and done quickly, one of the most interesting survivals from the past still living on this earth will follow the Quagga into extinction".

Twentieth Century Population Distribution

The thylacine is both nocturnal and crepuscular, and even in the early days of settlement, was rarely seen. Reliable sightings of species in time and space are required to infer changes in their geographic ranges, population trends, and likelihood of extinction (Roberts et al., 2009). Virtually all methods for providing species distributions are based on occurrence records (Ferrier, 2002). The IUCN (2012) defines the extent of occurrence as:

"The area contained within the shortest continuous imaginary boundary which can be drawn to encompass all the known, inferred or projected sites of present occurrence of a taxon, excluding cases of vagrancy".

A species will not normally be found throughout the full extent of its area of occurrence, as this will inevitably contain unsuitable habitats. The area of occupancy is defined by the IUCN as:

"The area within its 'extent of occurrence' which is occupied by a taxon, excluding cases of vagrancy".

The first detailed account of the former distribution of the thylacine was that provided by Guiler (1961). Guiler drew upon government and VDLC bounty records from 1888 to 1914 to map the thylacine's distribution across the state. The resultant map was not specific to a year or decade; rather, it provided a general overview for the 26-year period that the two bounties ran concurrently. Guiler (1961) notes:

"It is apparent (from the bounty record) that the thylacines were caught in all types of country ranging from the coast to the mountains, but with the greatest number being caught in the drier parts of Tasmania. Examination of the country in which many of the captures took place shows that the animals were taken in savannah woodland or open forest with rocky outcrops nearby in which the thylacines used to hide by day".

The authors set out to retrospectively chart changes in the thylacine's distribution in the four decades between 1900 and 1940, extending their study beyond the death of the last known captive thylacine in 1936.

Estimating the distribution and size of the thylacine population retrospectively is an extremely difficult task, because of the species' elusive behaviour and low densities. The capture, kill, and sighting (CKS) data upon which

¹¹ Examiner, 1st March 1930, p.9.

¹² Mercury, 3rd June 1936, p.10.

¹³ Hobart Daily Post, 30th October 1909 & World, 10th September 1918, p.6.

¹⁴ Table Talk, 1st October 1937, p.39.

¹⁵ Examiner, 1st March 1930, p.9.

¹⁶ Fauna Board Records - AOT AA612/1/59, Sharland letter & broadcast notes, 26th December 1938.

¹⁷ Reported: The Queenslander, 25th February 1932, p.43.

our estimations are based is largely compiled from the species' interactions with non-scientists (i.e. bushmen, hunters, farmers, amateur naturalists and members of the public), and consequently constitutes an important and underutilised source of information about the thylacine's prevalence and former distribution.

An exhaustive search of historical records¹⁸ for the period 1900-1940 was undertaken, together with a reappraisal of government and VDLC bounty claims to locate documents, newspaper reports, and registry entries that cite the live capture or kill of thylacines. Pre-1936 sightings were incorporated in the study, as it would have been highly improbable for these accounts to have been spurious or imagined prior to the death of the last known captive. In addition, first-hand sightings from trappers, farmers, naturalists, and old timers (post-1936 to pre-1940), with an incontrovertible knowledge of the species, were included.

A detailed analysis of the CKS records was then undertaken to identify long-term trends in the numbers of thylacines across Tasmania, with population changes further analysed by region to determine whether changes occurred uniformly across the state.

Results

A total of 1167 CKS records were compiled for the period 1900-1939. These are listed chronologically in the appendix. The geo-reference of each CKS record was mapped using Google Earth Pro (Version 7.1) and date plotted onto one of a series of five maps for the periods: 1900-1904, 1905-1909, 1910-1919, 1920-1929 and 1930-1939. The results are summarised in Figs. 5 & 6. With respect to government bounty claims, Guiler (1985, p.69) states:

"Some latitude and discretion has to be taken in the interpretation of the data. For example, there were sixty claims made by the residents of Ross and the surrounding district but it is highly unlikely that these thylacines were caught in the immediate vicinity of Ross. Talks with some old residents of the town many years ago revealed that the animals were mostly caught in the hills to the east of the town or in the foothills of the Western Tiers".

In our mapping, a 50km radius was applied to bounty claims where such circumstances were thought likely to apply.

The IUCN (2012) currently applies a stratified structure of nine categories for assigning threat levels for each species or subspecies ranging from 'Extinct' to 'Not Evaluated'. At the highest levels of threat, taxa are designated as 'Critically Endangered', 'Endangered', or 'Vulnerable' if a population decline of 80%, 50%, or 30% is observed within a given time frame. Croteau & Mott (2011) state:

"A series of quantitative criteria is measured for inclusion in these categories, including: reduction in population size, geographic range size and occupancy of area, total population size, and probability of extinction. The evaluation of these criteria includes analyses regarding the number of mature individuals,

generation time, and population fragmentation. Each taxon is appraised using all criteria. However, since not all criteria are appropriate for assessing all taxa, satisfying any one criterion qualifies listing at that designated threat level".

Applying IUCN guidelines, we have provided a threat assessment for each decade from 1900 onwards, based on our population estimates.

Anecdotal evidence from bushmen strongly supports the existence of a pair bond between thylacines of breeding age, and that this bond functioned within a fixed home range (Bailey, C., pers. comm.). Various estimates from 26km² to 260km²+ have been proposed for the size of the thylacine's home range. The only research undertaken, albeit retrospectively, was that by Guiler (Guiler & Goddard, 1998, p.138). Guiler based his assessment on the bounty submissions from the VDLC's Woolnorth property in the far north-west of the state, and from the claims of the Pearce, Jenkins and Stannard families in the Central Highlands. He concluded that the average home range varied between 50km² (favoured habitat) to 88km² (less favoured habitat) depending on the locality. For this paper, we have used Guiler's upper home range estimate (88km²) to provide a measure of population size. As no field studies were undertaken on the thylacine, the given post-1900 population estimates should be viewed for what they are - retrospective approximations based on the area of occurrence, rather than an accurate census of the species.

1900-1904

A total of 648 CKS records were collated and plotted for 1900-1904 [Fig. 5(i)]. These show that during the early part of the decade, the thylacine was found throughout its entire historical range from the east to west coasts of Tasmania. CKS reports were even noted in the near environs of Hobart and Launceston during this period. A credible estimate for the total thylacine population at the turn of the century (1900) would be around 2000 individuals; this being the lower limit of Guiler's population assessment. If the population had been significantly smaller, then in all probability, the thylacine would have become extinct in the 1920s. From 1900-1904, the species would have been classified as vulnerable under current IUCN criteria.

1905-1909

A total of 221 CKS records were collated and plotted for 1905-1909 [Fig. 5(ii)]. These records show the first noticeable signs of a thinning of the population in the far north-east of the state. From contemporary bushmen's accounts, this is believed to be the area where the epizootic disease was first observed in the late 1890s (Bailey, C., pers. comm.). Paddle (2012, p.88) concurs, and provides a precise date and location:

"Its initial appearance, at present, appears to have occurred in north-eastern Tasmania, around St Helens, in 1896".

The rapid decline (-63%) of the thylacine population from 1905 to 1908/⁹, as documented in the bounty records, is consistent with the IUCN criterion for listing

¹⁸ Tasmanian Animals and Birds' Protection Board papers, Tasmanian Archive and Heritage Office, Queen Victoria Museum (Tasmanian tiger files), International Thylacine Specimen Database (ITSD), Tasmanian newspapers, and national and international zoos.

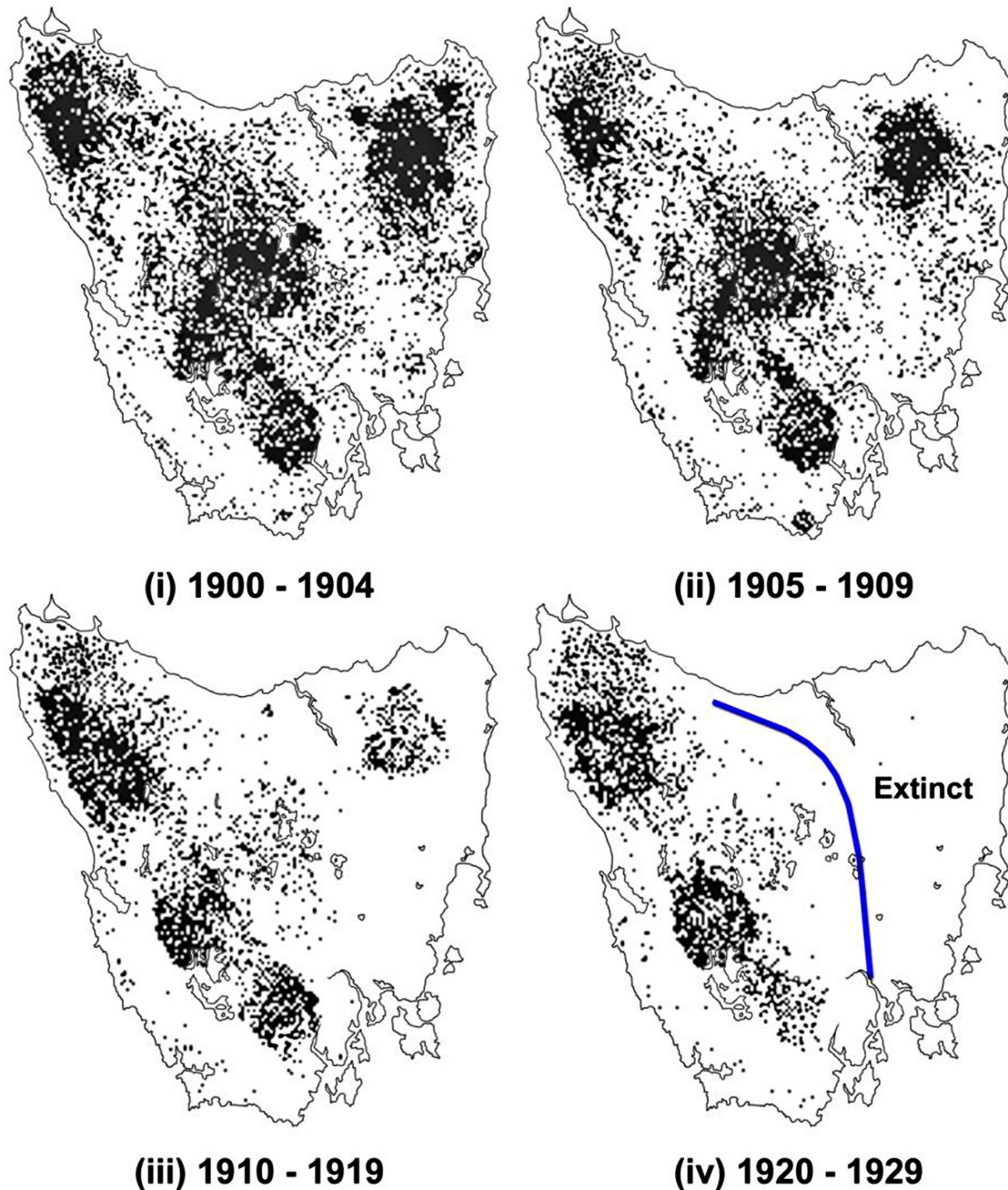


Figure 5 (i-iv). Thylacine distribution in Tasmania (1900-1929), based on 1040 geo-referenced capture, kill and sightings records. Stippling = extent of known occupancy.

the species as 'Endangered' or 'Critically Endangered', and would have reduced the population to an estimated 740 individuals by the end of the decade. Bulte et al. (2003) are in broad agreement with this estimate:

"A considerable population of tigers most likely existed in 1909 when the bounty scheme was terminated, and chances are that population was sufficiently abundant to ensure the continued survival of the species. Our numerical model estimates an 'all time low' level of abundance of about 632 tigers (in 1907), which eventually increases to a steady-state level of 779 animals after hunting ceases".

1910 – 1919

A total of 74 CKS records were collated and plotted for 1910-1919 [Fig. 5(iii)]. As the effects of the epizootic disease became more widespread, the evidence shows

that the thylacine became extremely scarce to the east of a line drawn between Launceston in the north and Hobart in the south. An eastern extinction is evident, with the last verified kill in the north-east occurring at Myrtle Grange near Mathinna, on the fringes of Ben Lomond National Park, in May 1912^{19,20}, and in the south-east at St. Marys in June 1920²¹. A female thylacine with three pups caught at Kelvedon in 1919 is the last recorded live capture in the east of the state²². E. M. Butterworth claims he shot a tiger worrying his sheep at Runnymede in 1922²³, but

¹⁹ Examiner; 24th May 1912, p.4.

²⁰ The Dilger specimen was acquired by the Queen Victoria Museum (Launceston) on the 24th May 1912 [QVM2006].

²¹ Examiner; 18th June 1920, p.6.

²² Laird Collection, Archives Office of Tasmania, NS1143.

²³ Wildlife, July 1946, Vol. 8, (7), p.247.

the authors have been unable to verify his account from other sources. If correct, this would extend the thylacine's existence on the east coast into the early 1920s. The thylacine became locally extinct on the VDLC's property at Woolnorth in the far north-west of the state from 1914 onwards, with no further captures or kills reported after this date.

Pearson (1946) and Bailey (2014) cite population displacement as a concomitant factor responsible for the absence of thylacine sightings in the east of the state. Pearson states:

"The thylacine had been pushed out from the neighbourhood of settlement years ago, and had taken to living in the wilder regions of the State which probably did not constitute its true environment".

Bailey concurs:

"During the first quarter of the twentieth century, the thylacine ventured into areas that it would have previously precluded from its preferred domain. Movement to these areas would mainly have come from the eastern half of the state, and this may be one of the reasons for an absence of sighting reports from this area".

1920 – 1929

A total of 97 CKS records were collated and plotted for 1920-1929 [Fig. 5(iv)]. The records show that the population continued to contract westwards, but maintained a presence in the Arthur-Pieman River area in the north-west, the Franklin-Gordon River area in the west, and the Florentine Valley in the south. These three subpopulations appear to have been linked by a natural corridor passing to the south of the central highlands. The existence of this corridor was first proposed by Bailey (2013, p.279). It now seems virtually certain that the thylacine became extinct, or functionally so, in the developed, eastern half of the state during the early 1920s. That said, there is some evidence to suggest that a relict population, probably numbering no more than a few individuals, survived in the area to the north of Ben Lomond into the early 1930s (Collins, [Mt. Direction, 1930]²⁴, Lawes, [Cuckoo Valley near Mt. Stronach, 1930]²⁵, Woods, [Ringarooma, 1934-5]²⁶, and Peck, [Mt. Barrow, 1935-6]²⁷). The authors, although not discrediting these accounts, are of the opinion that dating discrepancies and misidentifications may account for these anomalies, as all the reports were made retrospectively, many years after the alleged sightings took place. Collins dates his sighting with his recollection of seeing a tiger at the old Beaumaris Zoo: i.e., he states *"around this time"*, and gives the date as 1930. As the zoo had moved to its new location on the Domain in 1921, this appears to be an obvious dating error. Woods recalled seeing the eye reflection of what he thought was a tiger illuminated by his flashlight when inspecting snare lines at night. This sighting may possibly be a simple case of misidentification. The fact

that no kills or captures were recorded in the Ben Lomond area during the 1930s further weakens the north-eastern survival argument.

The Mercury of the 15th May 1923 (p.8) reported on a meeting of the Royal Society of Tasmania in which Arthur Reid, the curator of the Beaumaris Zoo in Hobart, gave an account of a recent journey along the east coast of Tasmania to obtain animals for the zoo:

"The whole journey, he said, occupied about 400 miles, and he went in and out of all the ports and townships as far as Musselroe, on the East Coast. He had been told that he would find there enormous numbers of forester kangaroo, but he was very disgusted with the search, as they failed to bring home one. He saw very few wallaby, opossum, or kangaroo. During the whole of his travel, Mr Reid said he failed to see one Tasmanian marsupial wolf, which species, he said, must be extinct on the East Coast, and as they have not one at the Zoo, their only possibility of obtaining one was on the West Coast".

Reid's comments are significant in that after a journey of 400 miles (640km), taking in all the east coast ports and towns, he neither observed a thylacine, nor was offered the opportunity to purchase a specimen.

In 1928, in a somewhat belated effort to determine the status of the thylacine, Col. John E. C. Lord²⁸, the Chairman of the Tasmanian Advisory Committee on Native Fauna, sent a questionnaire to the superintendents of all four Tasmanian police districts asking them to provide feedback on the presence of "tigers" in their respective districts, and for their opinion on whether protection of the species was advisable. Paddle (2000, p.176) poignantly states:

"This approach deliberately ignored the abilities of the state's naturalists and scientists".

Lord's police survey was prompted by the efforts of his cousin, Clive E. Lord, the director of the Tasmanian Museum, to place the thylacine on the totally protected list. Paddle (2000, p.177) notes that of the 38 stations that responded, none recalled the prevailing presence of thylacines within their districts. Of the 19 stations responding from the north-east, all confirmed that it had been *"many years"* since any thylacines had been reported within their districts. Only in the southern and north-western districts were the reports contemporary, with the most recent being from the early 1920s. It should be noted that these reports need to be interpreted with a degree of discretion, as by no means could a police questionnaire be deemed a credible population survey.

1930 – 1939

A total of 127 CKS records were collated and plotted for 1930-1939 [Fig. 6]. The records show that by the early 1930s, the thylacine had all but disappeared from its former strongholds in the Midlands and Central Highlands, with only 4 sightings noted. It had also retreated further inland from the VDLC's property at Woolnorth in the far north-west of the state, where it had

24 1930, Collins, AOT NS 896/27, Thylacine Competition Entry, Collins, 21st August 1981.

25 1930?, Lawes, AOT NS 896/29, Thylacine Competition Entry, Lawes, 10th September 1981.

26 1934-35, Woods, Guiler & Godard, 1998, p.148.

27 1935-36, Peck, AOT NS 463/1/1, QVMAG Thylacine Reports, Peck, 8th August 1952.

28 Col. J.E.C. Lord was also Commissioner of Police and Chief Inspector of Fisheries & Game.

effectively become locally extinct from 1914 onwards. Thylacines continued to be sighted along the north coast from Montagu to Wynyard during this period. The IUCN (2008^b) states: “The last populations may have occupied the less accessible, dense rainforest areas of south-western Tasmania”, but these suboptimal habitats were simply too wet and devoid of game to provide sanctuary for the species. The CKS records show that four subpopulations existed into the 1930s [Fig. 6.]: the Arthur-Pieman in the north-west [A], the Franklin-Gordon in the west [B], the Florentine in the south [C], and the Cape Sorrell-Port Davey population along the south-west coast [D]. All four subpopulations are located in areas that historically were deemed to be good to excellent thylacine habitat. That

the populations were breeding is evidenced by the sighting of females with young in all four areas.

In an attempt to calculate the area (km²) occupied by each of the four thylacine subpopulations known to be extant in the 1930s, the CKS data was aggregated into 20×20 km² grid cells and mapped using Google Earth Pro (Version 7.1). The minimum convex polygon (MCP) method was employed to determine the extent of the area of occupancy. This method has many drawbacks, including overestimation of ranges, but for the purpose of this study, with limited data sets, we feel it provides a base from which future research can be conducted. A cell was deemed to be occupied if a capture, kill or verified sighting

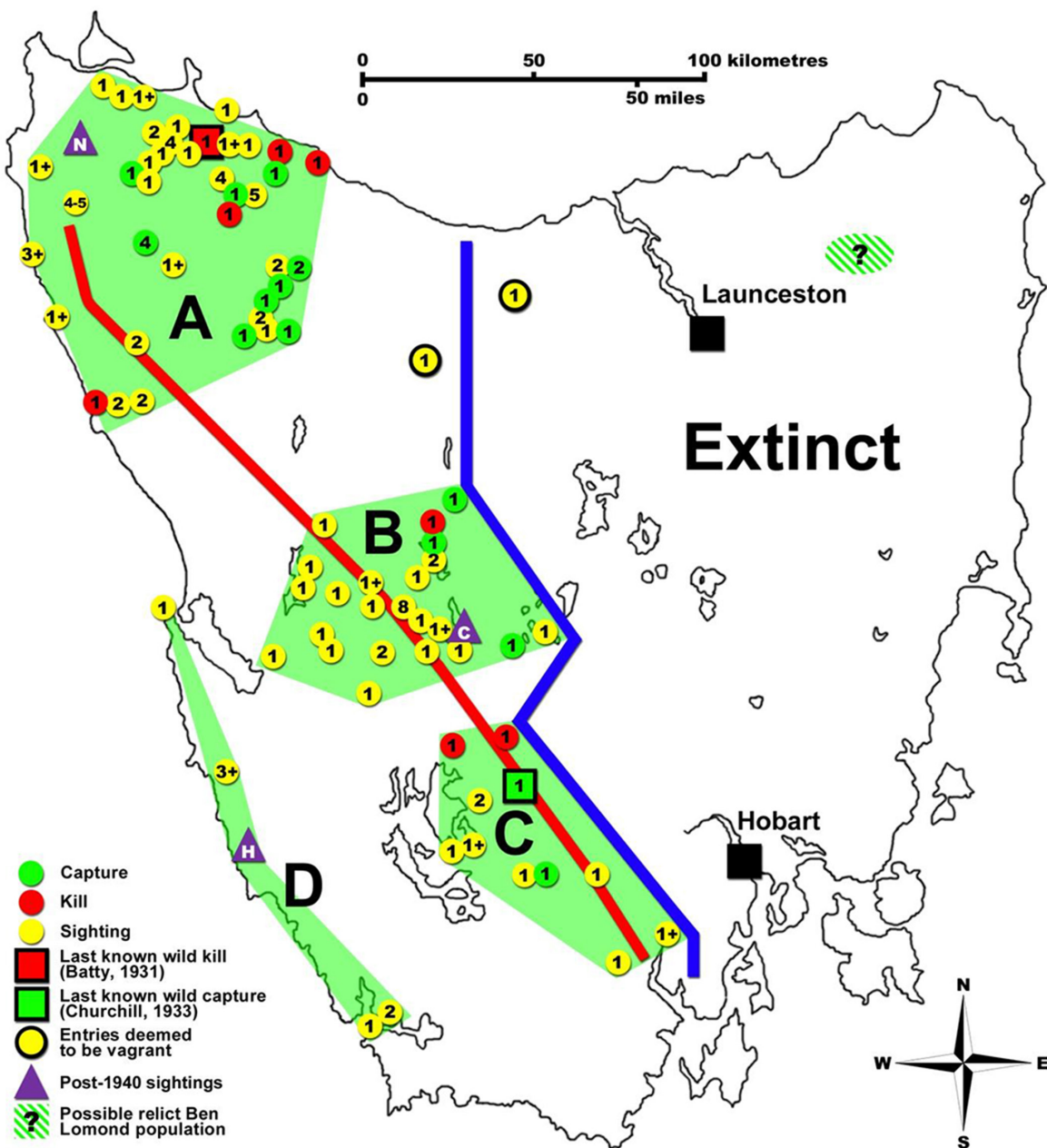


Figure 6. Thylacine distribution in Tasmania (1930-1939), based on 127 geo-referenced capture, kill, and sightings records. The number within each circle corresponds to the number of thylacines reported for that reference site. Red line = hypothetical Bailey corridor (confirmed path - Bailey, pers. com., 14/11/2014). Blue line = functional extinction line. Green shading corresponds to the known area of occupancy of the four subpopulations: (A) Arthur-Pieman, (B) Franklin-Gordon, (C) Florentine, (D) Cape Sorrell-Port Davey. Purple triangles correspond to notable post-1940 sightings by C: Crawford (1952), H: Hanlon (1963) and N: Naarding (1982) as detailed in the text.

was recorded within its boundaries. Unfortunately, we were unable to distinguish between a permanent presence and a sporadic occurrence within the cells of the plot area because of the scarcity of data. Guiler's upper home range estimate (88km²) was then used to determine the probable size of each population.

The results show that the Arthur-Pieman was the largest of the four subpopulations, occupying an area of approximately 8400km² (total of 21 cells). The area was bounded by the coast in the north, the Pieman River to the south, the Mersey River in the east and the town of Temma in the west. The Arthur-Pieman would have potentially supported a maximum of 95 thylacines or 190 if paired. From a historical perspective, the last confirmed wild thylacine kill was that by Wilf Batty on the 13th May 1930²⁹, at his family's property in Mawbanna, on the northern boundary of the Arthur-Pieman population [Fig. 6].

The Franklin-Gordon population occupied an area of approximately 5200km² (total of 13 cells). The area was bounded by Lake Meston in the north, the Jane River in the south, the Dee River in the east and Macquarie Harbour in the west. The Franklin-Gordon would have potentially supported a maximum of 59 thylacines or 118 if paired.

The Florentine population occupied an area of approximately 3200km² (total of 8 cells). The area was bounded by the Rasselas Valley in the north, the Arve Valley in the south, the town of Woodstock in the east and the Wedge River in the west. The Florentine would have potentially supported a maximum of 36 thylacines or 72 if paired. Throughout the 1930s, the Florentine population continued to contract, and this ostensibly was due to the activities of several noted thylacine hunters operating in the area. Elias Churchill and Walter Mullins both snared in and around the Florentine. It was Churchill who was responsible for the last recorded live capture, at Tyenna in 1933 [Fig. 6]. Churchill's "tiger" was subsequently sold to the Beaumaris Zoo in Hobart and became the last known captive specimen.

The Cape Sorrell-Port Davey population was the smallest of the four subpopulations and occupied an area of approximately 1600km² (total of 4 cells). The area was bounded by Cape Sorrell in the north and Port Davey in the south and advanced inland some 10km from the coast. The Cape Sorrell-Port Davey area would have potentially supported a maximum of 18 thylacines or 36 if paired. Occasionally, solitary vagrants were reported outside these four areas, but such occurrences were rare.

Based on the total area of occupancy (18,400km²), which equates to a 57% reduction of the thylacine's former range³⁰, and Guiler's upper home range estimate of 88km², we calculate that a total population of 208 thylacines survived into the 1930s, with a theoretical maximum of 416 (if each home range was occupied by a pair). If the home range estimate is reduced to 60km², a population of 306 thylacines or 612 (if paired) results, and if the home range estimate is

increased to 100km², a population of 184 thylacines or 368 (if paired) is the result. Realistically, the population would have been lower than the given maximum, as not all the area of occupancy would have been suitable habitat. The authors conclude that a population of approximately 300 thylacines survived to the end of the 1930s. This equates to a population decline of 85% or approximately 2% annually from 1900 to 1939. The degree of decline has parallels with that of DFTD in the Tasmanian devil population. Bruniche-Olsen et al. (2013) note that:

"In less than two decades, DFTD has caused a more than 85% overall population decline".

Mooney (2013) states that there were 100 thylacines left in the wild when the last wild capture was made in 1933:

"As to the fate of those last 100 thylacines... my suggestion is they were fragmented into small groups, some of which just fizzled out like flags being brushed off a war game".

Our population estimate is above that of Mooney, but not significantly so as to be worthy of critical comment. Towards the end of the 1930s, the thylacine would have been designated as critically endangered under current IUCN criteria. This classification applies when there are fewer than 250 mature individuals remaining. Small geographical range size is thought to increase extinction risk because of its relationship with low population size and the associated danger from demographic and environmental stochasticity (Gaston, 1994). With a population that is both fragmented and in rapid decline, a strong Allee effect becomes evident. Traill (2010) states:

"The Allee effect is a type of inverse density dependence that occurs when declining populations reach a point where per capita birth rate drops to a point where population growth rate becomes negative, often as a result of increasing difficulty of individuals finding mates, the breakdown of social structure in cooperatively breeding species, or inbreeding depression. These factors can act independently, but usually concomitantly, in driving a population to extinction".

Legal Protection

In August 1929, the Animals and Birds Protection Board gave partial protection to the thylacine by declaring a closed season in December. At that time, it was mistakenly thought to be the month of year in which the species bred. Sleightholme & Campbell (2014) note that:

"A closed season at the termination of the breeding cycle would have conferred little, if any, protection to the species".

On the 10th July 1936, the thylacine finally received full legal protection under Tasmanian law and became a wholly protected species under the Animals and Birds Protection Act (1928).

Post-1936 Deliberations & Searches

The presence or absence of the thylacine in its last known strongholds was noted in various newspaper articles

29 Advocate, 14th May 1930, p.6.

30 Tasmania's area is 68,401km², of which the main island covers 64,519 km². Guiler states that half the area of the state was not favoured thylacine habitat, which leaves a total theoretical habitable area of 32,259km². Therefore, the total area of occupancy in the 1930s at 18,400km² equates to a 57% reduction in the thylacine's former range.

during the 1930s. E. P. Andrewartha (Secretary of the Fauna Board) writing in the Australasian newspaper of the 3rd October 1936 (p.50), acknowledged that:

"The tiger still persists in small numbers in the wilder parts of the West Coast".

A. W. Burbury, writing in the Mercury newspaper of the 8th May 1937 (p.10), states:

"You are mistaken in supposing that the native tiger is as numerous now as it was 50 years ago. At that time the animals existed in considerable numbers in the eastern parts of Tasmania, and also throughout the Western Tier country and the Central Plateau. Now there is not a single one left, so far as is known, between the main road from North to South and the East Coast, nor in the western sheep country, including that of the Great Lake area".

The Examiner of the 19th February 1937 (p.10) notes:

"Mr. J. A. Daly, a prospector, who returned to Hobart several days ago after over a year on the Jane River goldfield, told a representative of "The Examiner" today that in the Jane River district he had found many clear indications of the presence of tigers. The goldfield, he said, was situated about 20 miles by a rough track from the West Coast road, and was in very rough country. Here the tigers had not yet been driven back. To get to the field the Jane River had to be crossed by a log, and at each end of the log, in soft earth, were clear marks of the Tasmanian tiger. Many of the prospectors and timber workers in the neighbourhood had met with them, and there were several stories of their ferocity. Much of the country had never been explored, and the beasts, driven away from the inhabited country some time ago because of their depredations on sheep, now appeared to exist in fairly large numbers near the West Coast".

The Mercury of the 19th August 1937 (p.11), states:

"Mr. Harry Pearce, of the Gwelph estate, which lies between Gwelph River and Mt. Hobhouse, informs me that a few weeks ago he saw a fine specimen, and when snow was on the ground he saw tracks of several others on the sides of Mt. Hobhouse. Mr. Pearce was surprised to learn that it is feared this animal is becoming extinct, and expresses the opinion that there are still plenty of tigers about".

The naturalist Michael Sharland, in his regular "Peregrine" column in the Mercury of the 18th January 1936 (p.5), writes:

"Few people nowadays can see the marsupial wolf (thylacine) in the wild state; for it has been driven to the unsettled and untracked western parts of the State, where it exists in scattered companies".

Further, in an article in the Northern Miner of the 7th July 1937 (p.1), Sharland elaborates:

"It is not yet extinct, but in the last 10 years its numbers have been reduced to such an extent as to suggest that 10 years hence the last living tiger will have disappeared. From a once extended range throughout the island, it has now taken refuge in the mountain country of the west and south-west".

The Advocate of the 17th March 1934 (p.3) published

comment on the thylacine's occurrence by Tasmania's principal wildlife dealer, James Harrison:

"It has strongholds in the wild north-western part of the State".

Harrison knew the haunts of the thylacine well, and supplied the Beaumaris Zoo in Hobart (at both its Sandy Bay and Queen's Domain locations), as well as the Melbourne Zoo, with a number of thylacines between 1910 and the early 1930s. All of Harrison's thylacines were procured from the north-west of the state.

In a concerted effort to establish where, and in what numbers thylacines might still be found, three expeditions were organised by the Fauna Board in the late 1930s. The Examiner newspaper of the 19th February 1937 notes:

"The request by the State Fauna Board for information about Tasmanian tigers, which were believed to be almost extinct, has brought to light valuable facts about them. The board is not concerned with their protection as animals, but, in view of their scientific interest, it is desirable that the species should not go out of existence. Steps are being taken by the Animals and Birds Protection Board to organise experienced parties of bushmen to search remote areas of the State to discover where and in what numbers specimens of the Tasmanian tiger may be found. The move has been actuated by the grave danger of the Tasmanian tiger becoming extinct and the unique features of the marsupial thereby being lost to science".

Search 1 - April 1937

The first expedition to the far north-west of the State was headed by Sgt. M. A. Summers. The expedition reported seeing signs of thylacines, particularly in the Arthur-Pieman area inland as far as the Lofty Ranges and the Donaldson River Fig. 7 [1]). In his report dated 14th May 1937 (p.3)³¹, Summers writes:

"I am convinced from reliable information received that there are quite a number of Native Tigers throughout the whole, or practically so, of the source of the Arthur River [and] that there are a considerable number between the Donaldson Rivers and the timbered country bounded by the Corinna Road. The latest to be seen was on the 26th ultimo by Charles Gonion, motor driver Waratah, near the 19 mile, about daybreak on that date. He had a good view of it as it ran along the road in front of the car for a few yards before disappearing into the bush. Gonion describes the animal as being of good size. Thomas Bell, foreman in charge of the men on the Corinna Road, and recognised as being one of the hardest bushman and who has a very thorough knowledge of the country along the whole of the Savage River, during the month of February was out on the Lofty Ranges, saw several native tiger in that locality and heard them at night in the vicinity of where he is now camped, about 3 miles from Corinna, in the Middleton Creek area. Men employed with Mr Bell have also heard the tiger hunting at night. There is reliable information that during the present year a number of the native tiger have been seen and heard in the vicinity of Longthorne Creek, Dolly River, and along the Arthur River to the High Peak.

³¹ Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Summers police report, Wynyard station, 14th May 1937, p.3.

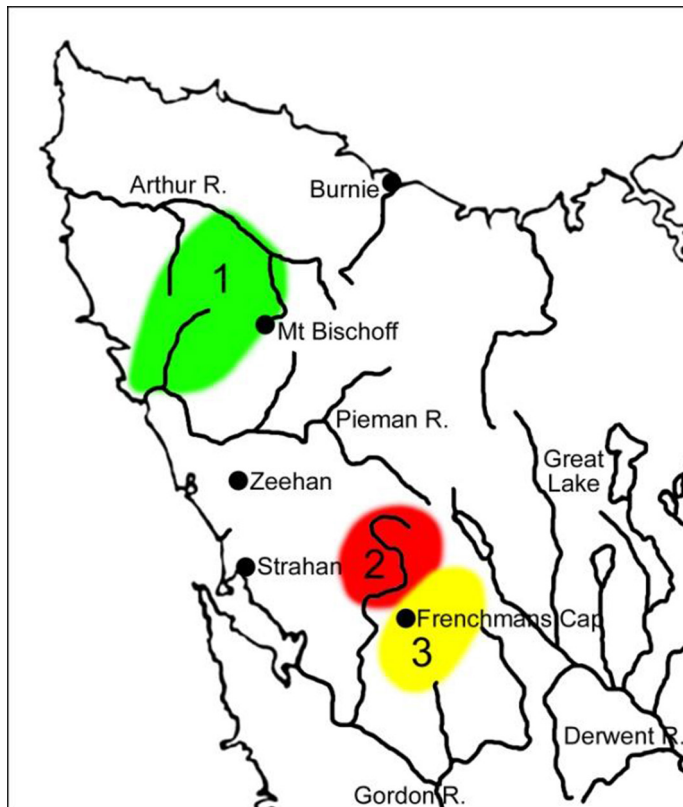


Figure 7. 1930s thylacine expedition search areas (1-3).

The Smith brothers who are prospecting in this locality have, so I have been informed, heard them hunting in the vicinity, and tracked them on the bank of the Arthur, so that as I have already stated, they are known to exist throughout the whole source of the Arthur River”.

Summers recommended that a sanctuary be established in the area, but this was not actioned.

Search 2 - November 1937

The second and third expeditions to the West of the state were led by Arthur Fleming and were centred on the Raglan Range and Franklin River (Fig. 7 [2]). In his report³² to the Chairman of the Animals and Birds Protection Board, Fleming states:

“Beginning at the southern end of the Raglan Range and travelling in a southerly direction within a radius of 10 miles, we found tracks of tigers in eleven different places. It may be that more than one of the tracks were made by the same animal, but I would say definitely that they were at least four different animals which made the marks”.

Search 3 - November 1938

The third expedition examined the country to the south of the area previously investigated (Fig. 7 [3]). In his report dated 24th November 1938³³, Fleming writes:

“We descended into the Thirkells Creek Valley where we found tracks of the thylacine and obtained plaster casts of the same. We then continued to the Jane River

Goldfield, where we made our headquarters, and from there explored the surrounding country – west and south-west of Jane River Goldfield, and along a muddy tributary of the Jane River, south-west of Warnes Lookout. We found tracks of the thylacine that were defined clearly enough to obtain a plaster cast, and travelling from the Goldfields on the 18th to the upper reaches of the Jane River, we traced the thylacine in several places, along the banks of the river also onto Lightning Plain, near what is known as Riner’s Camp. Here we camped for two days, exploring the country around. We obtained further evidence that thylacine still inhabited this locality and we secured our last plaster cast of the footprint of one of these animals. Although we discovered tiger tracks on the Loddon Plains, they were not sufficiently defined to enable casts to be taken”.

As a representative of the Royal Zoological Society of NSW, the naturalist Michael Sharland accompanied the search party and confirmed the authenticity of the various prints as belonging to the thylacine. Sharland (1938/9, p.29) states:

“We descended into the Beech forests along Thirkells Creek, where we saw the first definite footprints of Thylacine. In the mud on the track that we were following the animal had made a splendid impression. Claws and pads were delineated clearly”.

Upon his return, Sharland, in a radio interview broadcast in December 1938³⁴ recalls:

“Tracks of the tiger were common on the game trails over ridge and moor, and we were able to prove that the animal is not as rare as has been generally supposed. Nowhere, of course, is it plentiful, but it certainly lives in these remote regions of Tasmania in fair numbers, and that is what I went to prove. It mustn’t be thought that because I failed to return with a specimen of these animals for public exhibition that the expedition’s quest was fruitless. It was never the object to catch a tiger. It was to try and determine how many were in a given spot, with a view to making a faunal sanctuary of the place most thickly inhabited by them, so that they would be free from the possibility of being caught in snares and permitted to remain unmolested in their natural state”.

The zoologist David Fleay made the following comment on the Thirkells Creek casts³⁵:

“As the toe marks were well defined and the claws had been pressed deeply into muddy ground, the plaster casts in early stages resembled dental plates with the claw impressions, now in reverse, projecting like teeth. The five toes, each on the same level, served to distinguish the footprints as those of the thylacine, and not those of a wild dog”.

Although no thylacines were directly observed during the course of these searches, contemporary sighting reports and evidence in the form of foot prints confirmed that in all probability, a relict population of thylacines inhabited these areas into the late 1930s. A critique of all three

32 Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Fleming Report, 6th November 1937, p.1.

33 Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Fleming Report to Chairman of the Animals & Birds Protection Board, 24th November 1938, p.1.

34 Sharland, “Hunt for the Tasmanian Tiger”, Radio 2FC (Sydney), December 1938.

35 The Australasian, 30th March 1940, p.36.

searches was that they were of too short a duration (lasting days rather than months) to thoroughly assess thylacine numbers within the respective search areas.

Discussion

A frequently asked question is - “Did the thylacine survive into the 1940s and beyond?”

Fisher & Blomberg (2012) state that the thylacine became extinct in the wild in 1935. Paddle (2000) contends that the thylacine became extinct with the death of the last captive specimen at the Beaumaris Zoo on the 7th September 1936. These extinction dates have broadly been accepted by the scientific community as fact, despite logic dictating that a secretive nocturnal animal, concealed amongst vast tracts of extremely dense vegetation, would persist well beyond the last known capture on the fringe of its habitat. Collar (1998) states:

“Over the past few decades there have been enough rediscoveries to warn us against overhasty assumptions of extinction (which may, I suspect, sometimes derive from simplification of the CITES criterion of 50 years without a record)”.

Archer (1978) argues:

“Reasons for assuming the Thylacine is in fact probably extinct include the strategy of populations. Originally thylacines occupied most habitats in Tasmania, but were uncommon in dense forest. It has often been suggested that although Thylacines may occur in their preferred habitats (e.g. woodland savannah), they may still lurk in the remote and relatively uninhabited forested areas of the Northwest. It seems, however, most improbable that it should wilfully restrict its range to these remote areas. It seems much more probable that Thylacines would make use of all potential habitat, and therefore continuously be seen on the human-populated margins of their remote sanctuaries. The lack of this constant human contact convinces me, sadly, that they are in fact extinct”.

Bulte et al. (2003) disagree:

“A viable population could possibly exist at near carrying capacity level in the periphery of its initial habitat. The low density, the shyness of the animals, and their nocturnal habits would prevent frequent encounters between these predators and humans”.

The authors contend that as the Fauna Board expeditions were led by experienced bushmen and naturalists who knew the thylacine well, their assessment that the species survived beyond 1936 cannot be casually dismissed. It is significant that all of the searches were within the 1930-1939 occupancy boundaries as shown in Fig. 6. We therefore conclude with near certainty that the species survived into the 1940s.

In the absence of physical evidence (living or dead specimens), researchers must rely upon information provided by sightings. Roberts et al. (2009) state:

“Evidence against extinction includes situations when the species is known to be difficult to detect and when there have been reasonably convincing local reports or recent unconfirmed sightings. Assessing the validity of alleged

sightings is particularly important for species that are critically endangered or thought to be extinct. What is accepted as a valid sighting can have a substantial effect on any assessment of whether extinction has happened, with concomitant implications for the assessment of subsequent sightings”.

The credibility of post-1936 thylacine sighting reports is invariably questioned, and often disparaged. Why this should be so is not entirely clear, as the validity of sightings for other critically endangered species are rarely dismissed so readily, particularly when those observations are reported within a few years of the species last being known to exist. Paddle (2014, p.155) states:

“Records of Thylacines post 1936 are undoubtedly of interest to the scientist as well as the lay researcher. While they do not amount to evidence for the continued existence of the species – nothing but a body will change that designation – nevertheless, should that evidence be forthcoming, then the information obtained from recent sightings will be seen to possess valuable distributional and behavioural data of relevance to the continued welfare of the species”.

A substantial number of reported sightings in the 1940s and early 1950s³⁶ were made by multiple persons sighting the same animal, or by bushmen or farmers with first-hand knowledge of the thylacine, yet these reports appear to carry little or no credence with the scientific community, and one must surely question why. It is significant that the vast majority of these sightings were within the 1930-1939 occupancy boundaries. Guiler (1985) states:

36 1940, Davie, (Jane River Goldfield), Fleay, “On the Trail of the Marsupial Wolf”, *Victorian Nature*, 11/1946; 1940, Davis, (Gum Ridge), Fleay, 1946, *Wildlife* 8 (6), pp.186-93; 1940, Wagner, (Grace Creek between Temma & Sandy Cape), AOT AA612/1/59 - Fauna Board Records, Police Report, Redpa Station, 31st December 1940; Mercury, 18th November 1941, (Lake St Clair); July 1942, Billing, (21 miles from Waratah – north side of Waratah Corinna Road), AOT AA612/1/59, Fauna Board Records, Police Report, Waratah Station, Billing, 20th April 1944; Sept 1942, Billing, (12 miles from Waratah – north side of Waratah Corinna Road), AOT AA612/1/59, Fauna Board Records, Police Report, Waratah Station, Billing, 20th April 1944; March 1943, Spencer, (Adamsfield) AOT AA612/1/59, Fauna Board Records, Police Report, Dowling, 23rd March 1944; June 1943, Billing, (Jones Creek, 16 miles from Waratah), AOT AA612/1/59, Fauna Board Records, Police Report, Waratah Station, Billing, 20th April 1944; 9th December 1943, Billing, (Magnet Valley, 4 miles from Waratah), AOT AA612/1/59, Fauna Board Records, Police Report, Waratah Station, Billing, 20th April 1944; Mercury, 16th September 1943, (Mt. Rufus); 9th January 1944, Billing, (Whyte River Valley, 12 miles from Waratah), AOT AA612/1/59, Fauna Board Records, Police Report, Waratah Station, Billing, 20th April 1944; Army News, 11th March 1944, Spencer, (Gold Creek, Styx River; Northern side of Jubilee Ranges); Mercury, 21st June 1944, (Waratah); 1946, Cashion, (Mt. Misery), AOT NS463/1/3, QVMAG Thylacine Correspondence, 20th February 1952; Mercury, 19th July 1947, (Laughing Jack Marsh); 1947, Rowe, (Dismal River), AOT NS463/1/1, QVMAG Thylacine Reports, Rowe, 25th November 1952; Mercury, 10th September 1948, (Goodwin's Hill); Mercury, 2nd December 1948, (Huon Valley); Mercury, 18th February 1949, (Ranelagh); October 1949, Lancaster & Wilson, (Craycroft River), AOT NS463/1/1, QVMAG Thylacine Reports, Lancaster, 30th January 1952; Mercury, 1st June 1949, (Mountain River); 1950, Herb, (Marrawah), AOT NS463/1/1, QVMAG Thylacine Reports, Herb, November 1952; 1951, Cox & Smith, (Frenchman's Cap), AOT NS463/1/1, QVMAG Thylacine Reports, Thorpe, 25th November 1951; 1951, Cashion, (Florentine Valley), AOT NS463/1/3, QVMAG Thylacine Correspondence, 20th February 1952; Mercury, 5th March 1952, (Repulse & Derwent Rivers); Mercury, 26th July 1952, (Corinna – Waratah, Florentine River); 30/12/1952, Seaton, (Little Gill River), AOT NS463/1/1, QVMAG Thylacine Reports, Crawford, 30th December 1952; Mercury, 7th February 1953, (Glen Huon).

"It never ceases to surprise me that since 1936 it has been lamely accepted that the thylacine was extinct or nearly so, even in the face of persistent sighting reports, some of which will stand considerable critical examination".

The casual dismissal of the thylacine's survival into the 1940s is challenged when evidence for the species' existence is provided by a respected zoologist. David Fleay filmed and photographed the world's last known captive thylacine at the Beaumaris Zoo in December 1933. In 1945, Fleay visited Tasmania with the objective of securing a pair of thylacines for captive breeding at the Sir Colin MacKenzie Sanctuary in Victoria³⁷. His 1945-46 expedition to the Jane River found evidence that thylacines still inhabited the area (Fleay-Thomson, 2007). Unfortunately, despite the reported near capture of a thylacine in a trap on Poverty Plain on the night of the 15th March 1946, hearing vocalisations, and recording numerous foot prints, the expedition returned empty handed. Fleay, in an article published in the June 1946 edition of *Wild Life*, states:

"The Poverty Plain thylacine, or another of its kind, came by the traps at last. Picking out the blind Bennett's wallaby in its stockade and endeavouring to reach it, the "tiger" evidently approached crouching low, and unfortunately for us, instead of being held by a paw in the special trap, all we caught was a tuft of hair from the would-be marauder's shoulder or chest; and he got away."

Rosemary Fleay-Thomson (Pers. com., 10/12/2014), who accompanied her father on his expedition, recalls:

"I was with my father when on our early morning inspection we found chaos around the large chain wire netting drop door trap. The padded dog traps were set off, and signs of a real scuffle surrounded the traps, with churned up muddy earth containing footprints and faeces. These, together with hair samples taken from the trap, were later confirmed by Dr Pearson at the Tasmanian Museum as being those of a thylacine".

Unless we refute Fleay's account and Pearson's identifications, we must acknowledge that the thylacine survived until at least 1946. It is relevant that in the following year, to the south of Fleay's original search area, two bushmen (Woolley and Thorpe), reported seeing a thylacine hunting a wallaby at close quarters between the Russell and Denison valleys³⁸. Further, on the 7th July 1947, an official government survey party observed a thylacine near Laughing Jack Marsh, not far from Derwent Bridge³⁹.

The survival argument becomes decidedly more contentious into the 1950s onwards, but warrants brief mention. A number of post-1950 sightings were reported by experienced naturalists, bushmen or park rangers, all of whom were highly unlikely to have made an error in identification.

In December 1952, Lindsay Crawford, scientific assistant to the Queen Victoria Museum (Launceston), surveyed an area to the south-west of Butlers Gorge⁴⁰. At a site bordering the Gill River, droppings and numerous thylacine tracks were discovered in the soft mud. Once

37 Mercury, 10th August 1945, p.11.

38 Mercury, 1st April 1947, p.2.

39 Examiner, 19th July 1947, p.2.

40AOT NS463/1/1, QVMAG Thylacine Reports, Crawford Report, January 1953.

again, this discovery was within the 1930-39 occupancy boundaries of the Franklin-Gordon subpopulation. Crawford states:

"Many tracks showed fine detail evidently being made the same day, since there had been a heavy shower of rain about dawn. Freshest set of tracks followed for some 50 yards, in a 'V' shaped course across the plain. Tracks generally easy to identify, and separate from wombats, owing to large size, and, in fresh tracks, the crescent-shaped line of impressions of the five toes, which were always inserted vertically into the ground, in contrast to the horizontal positioning of a wombat's toes. On hard ground the toe marks were often the only impression visible. Tracks were seen for a distance of about a mile up the valley towards the base of the Spires".

On the 9th February 1963, George Hanlon, an inspector with the Animal & Birds Protection Board, discovered fresh tracks of what he believed to be a thylacine running for some 150 yards (137m) along the sand near the Mainwaring River⁴¹. Hanlon photographed and carefully measured the tracks. He states:

"An examination of the tracks disclosed beyond doubt that they were those of a Tasmanian tiger. There is no animal in our bush except the tiger that could have made them".

Hanlon's discovery was within the 1930-39 occupancy boundaries of the Cape Sorrell - Port Davey subpopulation. On examining the photographs, Dr. Eric Guiler, Chairman of the Animal & Birds Protection Board, concluded the tracks were those of a thylacine⁴².

Smith (1981) published a questionnaire to evaluate the reliability of thylacine sightings. He investigated 320 reports from 1960-1980, and found that sightings did not appear to be area specific; rather, they were reported throughout the thylacine's entire historical range. Of the 107 sightings deemed by Smith as "good", 38 were recorded within the geographical area where thylacines were still known to be extant into the 1930s. The authors would question the reliability of sightings far removed from the known areas of occupancy in the 1930s, as even with statutory protection, thylacine numbers failed to make any significant recovery. Griffith (1973) cites population fluctuations, snaring, poisoning, and habitat alteration as possible reasons for the non-recovery of the species. He hypothesises that Tasmanian marsupials may have natural number-disease relationships, rather than the usual predator-prey relationships, and this proclivity could result in drastic population fluctuations. Griffith states:

"The practice of poisoning wallaby carcasses along snare lines was probably the principal cause for the complete disappearance of thylacine in many areas, and that since 1930 the most promising sightings have been in areas outside those of extensive snaring".

Mooney (2014, p.39) offers an alternate explanation:

"Thylacines may have had female philopatry, a system in which young males disperse to find non-related females while young females stay near home. Such a species

41 AOT AA613/1/148, Fauna Board Tasmanian Tiger Files, Tasmanian Police Report to Secretary of Animals & Birds protection Board.

42 Mercury, 7th May 1963.

is slow to colonise new or emptier areas because new females do not arrive in areas where local extinction has occurred. If mortality lifts or productivity falls to a certain threshold, the ability to top up neighbouring populations, let alone recolonise areas, is lost. The grim drum roll of extinction then begins”.

Notable amongst the post-1950 sightings was that made by Tasmanian Parks & Wildlife Officer Hans Naarding at Togari in 1982. Naarding states:

“It was raining heavily. At 2am I awoke and out of habit, scanned the surrounds with a spotlight. As I swept the beam around, it came to rest on a large thylacine, standing side on some six to seven metres distant. My camera bag was out of immediate reach so I decided to examine the animal carefully before risking movement. It was an adult male in excellent condition with 12 black stripes on a sandy coat. Eye reflection was pale yellow. It moved only once, opening its jaw and showing its teeth. After several minutes of observation I attempted to reach for my camera bag but in doing so I disturbed the animal and it moved away into the undergrowth. Leaving the vehicle and moving to where the animal disappeared I noted a strong scent. Despite an intensive search no further trace of the animal could be found”.

The Naarding sighting was kept confidential for two years whilst an extensive field search was carried out over a 250km² area, but despite best efforts, no evidence was found of the thylacine. The Naarding sighting was made at the north-western boundary of the Arthur-Pieman subpopulation known to be extant in the 1930s, and raises the possibility that a relict population survived in this area into the 1980s. Guiler, following his 1959, 1960, 1961, 1963 and 1980-1 expeditions to the far north-west, was also of the opinion that the thylacine may have survived in this area⁴³.

Sighting reports, near captures, vocalisations, hair samples and footprints are all positive indicators of survival, but as Paddle (2000, p.23) justifiably states: *“The criteria for establishing the existence of the thylacine beyond 1936 can*

⁴³ The Canberra Times, 5th December 1968, p.15.

only be met through the production of a body, either dead, or, preferably, alive”, and to date, this criterion has not been met. That said, for the scientific community to dismiss all post-1936 sightings as misidentifications or imagined seems somewhat contemptuous, and surely obscures the actuality of when (or if) the extinction event occurred.

Conclusion

The CKS data provides the most accurate assessment of the thylacine's post-1900 distribution to date. Historically, the species' distribution was continuous from the east to west coasts, with population densities highest in the dry and mixed sclerophyll forests and coastal heath of the east and north-west coasts, and lowest in the buttongrass plains of the south and south-west. At the beginning of the 20th century, the records show that there were three main thylacine populations in Tasmania. An eastern population in the area of the Ben Lomond National Park, a central population in the Highlands, and a north-western population in the area of the Arthur-Pieman rivers. Of these, the Central Highlands population was by far the largest. It is also known that a fragmented southern population existed along the south-west coast. That there was movement between these populations is evidenced by the rapid spread of the epizootic disease. The CKS records confirm that between 1900 and 1910, the thylacine population experienced a rapid decline, and the probable cause was not bounty hunting, but disease. The records reveal that the thylacine became extinct in the eastern half of the state in the early 1920s, and from its former strongholds in the Midlands and Central Highlands by the early 1930s. The remaining population became fragmented in the 1930s, with an Arthur-Pieman population in the north-west, a Franklin-Gordon population in the west, a Florentine population to the south and a Cape Sorrell - Port Davey population along the south-west coast. The study supports the existence of a corridor linking the three main populations as proposed by Bailey. The authors contend that the thylacine survived with near certainty beyond the death of the last captive specimen in 1936, and that the species was extant throughout the 1940s, and possibly beyond.

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APPENDIX I

CKS Source Data

The configuration of the data entries within the appendix follows the following format: Date, Snarer/Captor (if known), [Place / Region], Number of thylacines, (Additional reference), [CKS prefix: [K] = kill, [K^B] = Government bounty submission after Guiler (1961), [C] = live capture, [S] = verified sighting, [S*] = tracks, spoor, thylacine kill, or vocalisations identified].

It should be noted that the bounty dates [K^B] are payment dates, and not the date of the kill. Several weeks or months may have elapsed between the kill and payment being made. The thylacine had a distinctive and unique call. We have made the assumption that vocalisations heard and reported by experienced bushmen during the 1930s and 1940s were bona fide accounts.

Period: 1900 – 1904

23/1/1900, Wilson, [Preston, TNW], 1, [K^B]; 24/1/1900, [Woolnorth, TNW], 1, (Guiler, 1985, pp.99-101), [K]; 10/2/1900, Spencer, [St. Marys, TEC], 3, [K^B]; 10/2/1900, Dale, [Recherche Bay, TSW], 1, [K^B]; 10/2/1900, [Woolnorth, TNW], 1, (Guiler, 1985, pp.99-101), [K]; 12/2/1900, [Woolnorth, TNW], 1, (Guiler, 1985, pp.99-101), [K]; 13/2/1900, [Woolnorth, TNW], 1, (Guiler, 1985, pp.99-101), [K]; 24/2/1900, Carver, [Mainwaring Cove, TSW], 4, (Chronicle, 24/11/1900, pp. 47-48), [S]; 27/2/1900, Collins, [Stanley, TNW], 3, [K^B]; 29/2/1900, Whittaker, [Goulds Country, TNE], 1, [K^B]; 7/3/1900, Marshall, [Bicheno, TEC], 1, [K^B]; 7/3/1900, Hazelwood, [North Motton, TNW], 1, [K^B]; 7/3/1900, Stevenson, [White Hills, TML], 1, [K^B]; 13/3/1900, Stephenson, [North Esk River, TNE], 1, (Examiner, 13/3/1900), [C]; 21/3/1900, Brock, [Ouse, TEC], 1, [K^B]; 25/3/1900, [Woolnorth, TNW], 1, (Guiler, 1985, pp.99-101), [K]; 1/4/1900, Lee [Smithton, TNW], 1, [K^B]; 1/4/1900, Ford, [Stanley, TNW], 1, [K^B]; 1/4/1900, Ford, [Stanley, TNW], 2, [K^B]; 1/4/1900, Spencer, [St. Marys, TEC], 1, [K^B]; 10/4/1900, Brock, [Ouse, TEC], 1, [K^B]; 10/4/1900, Green, [Blessington, TBL], 1, [K^B]; 10/4/1900, Legro, [Fingal, TEC], 4, [K^B]; 10/4/1900, Rubenach, [Avoca, TEC], 1, [K^B]; 30/4/1900, Riley, [Honeywood, TEC], 1, [K^B]; 30/4/1900, Wilson, [Mt. Seymour, TEC], 5, [K^B]; 30/4/1900, Bantick, [Falmouth, TNE], 1, [K^B]; 30/4/1900, Hepburn, [Avoca, TEC], 1, [K^B]; 31/4/1900, Jenkins, [Bronte, TCH], 1, [K^B]; 5/5/1900, Evans, [Duck River, TNW], 1, [K^B]; 18/5/1900, Haley, [St. Helens, TNE], 1, [K^B]; 18/5/1900, Spencer [St. Marys, TEC], 1, [K^B]; 18/5/1900, Barnes, [Fingal, TEC], 1, [K^B]; 18/5/1900, Willett, [Stonehenge, TEC], 1, [K^B]; 18/5/1900, Whittaker, [Goulds Country, TNE], 1, [K^B]; 18/5/1900, Duckett, [Leipzig Bluff, TEC], 1, [K^B]; 23/5/1900, [Woolnorth (Bullock Paddock), TNW], 1, (Guiler, 1985, pp.99-101), [K]; 5/1900, Williams, [South Montagu, TNW], 1, (The North Western Advocate and the Emu Bay Times, p.2), [C]; 1/6/1900, Shadwick, [Lisidillon, TEC], 1, [K^B]; 8/6/1900, Parker, [Westbury, TML], 1, [K^B]; 8/6/1900, Stannard, [Dee Bridge, TCH], 1, [K^B]; 8/6/1900, Stokell, [Jerusalem (now Colebrook), TEC], 1, [K^B]; 8/6/1900, Mancer, [Lisidillon, TEC], 1, [K^B]; 8/6/1900, Hepburn, [Avoca, TEC], 1, [K^B]; 8/6/1900, Goldsmith, [Antill Ponds, TEC], 1, [K^B]; 13/6/1900, [Woolnorth (Mount), TNW], 2, (Guiler, 1985, pp.99-101), [K]; 14/6/1900, [Woolnorth, TNW], 1, (Guiler, 1985, pp.99-101), [K]; 26/6/1900, Parramore, [Campbell Town, TM], 1, [K^B]; 26/6/1900, Fiddler, [Greens Creek, TML], 1, [K^B]; 26/6/1900, Reid, [Turners Marsh, TNE], 1, [K^B]; 26/6/1900, Barnes, [Fingal, TEC], 1, [K^B]; 26/6/1900, Marshall, [Bicheno, TEC], 1, [K^B]; 26/6/1900, Nicholas, [Hadspen, TML], 1, [K^B]; 26/6/1900, Pyke, [Bicheno, TEC], 2, [K^B]; 28/6/1900, Goldsmith [Antill Ponds, TEC], 1, [K^B]; 28/6/1900, Richards, [Golconda, TNE], 1, [K^B]; 6/1900, McGee, [Run adjoining Ellenthorne, Ross, TML], 5, (Daily Telegraph, 28/6/1900, p.4), [K]; 2/7/1900, Abblitt, [West Montagu, TNW], 1, (The North Western Advocate and the Emu Bay Times, 8/7/1900, p.2), [K]; 9/7/1900, [Woolnorth, TNW], 1, (Guiler, 1985, pp.99-101), [K]; 19/7/1900, [Woolnorth (The Mount Beach), TNW], 1, (Guiler, 1985, pp.99-101), [K]; 19/7/1900, Boyes, [St. Helens, TNE], 1, [K^B]; 19/7/1900, McGee, [Ross, TML], 4, [K^B]; 19/7/1900, McGee, [Ross, TML], 1, [K^B]; 19/7/1900, Hall, [Goulds Country, TNE], 1, [K^B]; 19/7/1900, Cotton, [Riverside, TML], 1, [K^B]; 1/8/1900, Wilson, [Mt. Seymour, TEC], 1, [K^B]; 1/8/1900, Flack, [Riverside, TML], 1, [K^B]; 16/8/1900, Collins [Stanley, TNW], 5, [K^B]; 16/8/1900, Wilson, [Mt. Seymour, TEC], 1, [K^B]; 16/8/1900, Gamble, [Little Swanport, TEC], 1, [K^B]; 16/8/1900, Castle [Swanport, TEC], 1, [K^B]; 16/8/1900, Roach, [Jerusalem (now Colebrook), TEC], 1, [K^B]; 18/8/1900, [Woolnorth, TNW], 1, (Guiler, 1985, pp.99-101), [K]; 19/8/1900, [Woolnorth, TNW], 1, (Guiler, 1985, pp.99-101), [K]; 21/8/1900, Pearce, [Derwent Bridge, TCH], 5, [K^B]; 21/8/1900, Parsons, [Gretna, TEC], 1, [K^B]; 21/8/1900, Barnes, [Fingal, TEC], 1, [K^B]; 21/8/1900, Lee, [Smithton, TNW], 4, [K^B]; 21/8/1900, Nichols, [Tyenna, TFV], 1, [K^B]; 29/8/1900, Bilson, [Waratah, TNW], 1, [K^B]; 29/8/1900, Clesby, [Royal George, TEC], 1, [K^B]; 29/8/1900, Temple, [Dee Bridge, TCH], 2, [K^B]; 29/8/1900, Pace, [Longford, TML], 5, [K^B]; 30/8/1900, Marthick, [Irishtown, TNW], 1, (The North Western Advocate and the Emu Bay Times, 4/9/1900, p.2), [K]; 4/9/1900, Appleyard, [Cranbrook, TEC], 1, [K^B]; 6/9/1900, [Woolnorth (Valley Bay), TNW], 2, (Guiler, 1985, pp.99-101), [K]; 9/9/1900, [Woolnorth, TNW], 3, (Guiler, 1985, pp.99-101), [K]; 10/9/1900, [Woolnorth, TNW], 1, (Guiler, 1985, pp. 99-101), [K]; 18/9/1900, Warde, [Waratah, TNW], 1, [K^B]; 18/9/1900, Clesby, [Royal George, TEC], 4, [K^B]; 18/9/1900, Ellis, [Dee Bridge, TCH], 1, [K^B]; 3/10/1900, Grey, [Smithton, TNW], 1, [K^B]; 3/10/1900, Evans, [Duck River, TNW], 2, [K]; 3/10/1900, Collins, [Stanley, TNW], 4, [K]; 29/10/1900, Philpott, [Blackwood Creek, TML], 1, [K]; 29/10/1900, Howe, [Mole Creek, TML], 1, [K^B]; 29/10/1900, Henderson, [Bridgenorth, TML], 1, [K^B]; 29/10/1900, Stannard, [Dee Bridge, TCH], 1, [K^B]; 29/10/1900, Pearce, [Derwent Bridge, TCH], 5, [K^B]; 15/11/1900, Lee, [Smithton, TNW], 2, [K^B]; 15/11/1900, Collins, [Stanley, TNW], 8, [K^B]; 15/11/1900, Smith, [Avoca, TEC], 1, [K^B]; 15/11/1900, Allen, [Sisters Creek, TNW], 3, [K^B]; 20/11/1900, Bulman, [Mathinna, TBL], 1, [K^B]; 20/11/1900, Dean, [Geeston, TSW], 1, [K^B]; 20/11/1900, Parker, [Ouse, TEC], 1, [K^B]; 20/11/1900, Jenkins, [Bronte, TCH], 1, [K^B]; 21/11/1900, Williams, [Hampshire Hills, TNW], 1, (North Western Advocate and the Emu Bay Times, 21/11/1900, p.2), [C]; 30/11/1900, Styles, [Ringarooma, TNE], 1, [K^B]; 5/12/1900, Marshall, [Bicheno, TEC], 1, [K^B]; 14/12/1900, Williams, [Hampshire Hills, TNW], 1, (Examiner, 14/12/1900, p.7), [K];

18/12/1900, Cornish, [Buckland, TEC], 1, [K^B]; 1900, Cotton, [Swansea – 4 miles west of town, TEC], 1, (AOT NS 896/39, Competition Entry, Graham), [C – died in confinement]; 1900, Patman, [Dunrobin Estate, TEC], 8, (AOT, Animals & Bird Protection Board Papers, Patman letter, 27/11/1949), [S]; 21/1/1901, Wiggins, [Nugent, TEC], 1, [K^B]; 21/1/1901, Allen, [Sisters Creek, TNW], 3, [K^B]; 21/1/1901, Southwell, [Burnie, TNW], 2, [K^B]; 21/1/1901, House, [Forest, TNW], 1, [K^B]; 2/1901, Allen, [Sisters Creek, TNW], 3, [K^B]; 2/1901, Marshall, [Bicheno, TEC], 1, [K^B]; 14/2/1901, Radford, [Lisdillon, TEC], 1, [K^B]; 15/2/1901, Stevenson, [White Hills, TML], 1, [K^B]; 27/2/1901, Wilkins, [Seymour, TEC], 1, [K^B]; 30/2/1901, Jenkins, [Bronte, TCH], 2, [K^B]; 13/3/1901, Scales, [St. Marys, TEC], 1, [K^B]; 13/3/1901, Collins, [Stanley, TNW], 2, [K^B]; 1/4/1901, Jenkins, [Bronte, TCH], 8, [K^B]; 19/4/1901, Boyes, [St. Helens, TNE], 1, [K^B]; 24/4/1901, Freeman, [Fingal, TEC], 1, [K^B]; 29/4/1901, Southwell, [Burnie, TNW], 2, [K^B]; 29/4/1901, Etchells, [Penguin, TNW], 2, [K^B]; 2/5/1901, [Woolnorth, TNW], 1, (Guiler, 1985, pp.99-101), [K]; 16/5/1901, Price, [Longford, TML], 4, [K^B]; 16/5/1901, Wardlaw, [St. Marys, TEC], 1, [K^B]; 16/5/1901, Gatenby, [Cressy, TML], 1, [K^B]; 16/5/1901, Barwick, [Ross, TML], 4, [K^B]; 23/5/1901, Richardson, [Leipzig Bluff, TEC], 1, [K^B]; 23/5/1901, Pearce, [Derwent Bridge, TCH], 2, [K^B]; 30/5/1901, McGee, [Ross, TML], 1, [K^B]; 30/5/1901, Groves, [Cape Portland, TNE], 1, [K^B]; 30/5/1901, Harvey, [Bicheno, TEC], 1, [K^B]; 10/6/1901, French, [Melrose, TNW], 1, [K^B]; 19/6/1901, Cooney, [Waratah, TNW], 2, [K^B]; 19/6/1901, Garrett, [Exton, TML], 1, [K^B]; 26/6/1901, Ranson, [Springfield, TNE], 1, [K^B]; 26/6/1901, Kean, [Little Swanport, TEC], 1, [K^B]; 28/6/1901, [Woolnorth (Studland Bay), TNW], 2, (Guiler, 1985, pp.99-101), [K]; 28/6/1901, Newitt, [Golconda, TNE], 3, [K^B]; 10/7/1901, Gatenby, [Epping Forest, TML], 1, [K^B]; 10/7/1901, Riley, [Kellevie, TEC], 1, [K^B]; 12/7/1901, Robinson, [Ringarooma, TNE], 1, [K^B]; 12/7/1901, Nicholls, [Tyenna, TFW], 1, [K^B]; 13/7/1901, ?, [Scottsdale, TNE], 4, (Examiner, 13/7/1901, p.7), [2C, 2K]; 17/7/1901, [Woolnorth (Three Sticks), TNW], 1, (Guiler, 1985, pp.99-101), [K]; 18/7/1901, [Woolnorth (Spinks Paddock), TNW], 1, (Guiler, 1985, pp.99-101), [K]; 18/7/1901, [Woolnorth (Valley Bay), TNW], 2, (Guiler, 1985, pp.99-101), [K]; 19/7/1901, [Woolnorth (McCabes Paddock), TNW], 1, (Guiler, 1985, pp.99-101), [K]; 20/7/1901, [Woolnorth (McCabes Paddock), TNW], 1, (Guiler, 1985, pp.99-101), [K]; 12/8/1901, Barwick, [Ross, TML], 3, [K^B]; 12/8/1901, Woolley, [Glen Huon, TFW], 2, [K^B]; 12/8/1901, Thornbury, [St. Marys, TEC], 1, [K^B]; 12/8/1901, Temple [Dee Bridge, TCH], 1, [K^B]; 12/8/1901, Forbes, [Deddington, TML], 2, [K^B]; 12/8/1901, Squires, [Black Sugarloaf, TML], 1, [K^B]; 12/8/1901, Parker, [Westbury, TML], 1, [K^B]; 22/8/1901, Pearce, [Derwent Bridge, TCH], 9, [K^B]; 22/8/1901, Howe, [Mole Creek, TML], 1, [K^B]; 22/8/1901, Spencer, [St. Marys, TEC], 1, [K^B]; 22/8/1901, Riley, [Geeveston, TSW], 1, [K^B]; 22/8/1901, Harkness, [Latrobe, TML], 1, [K^B]; 22/8/1901, Harris, [Tunbridge, TML], 1, [K^B]; 22/8/1901, Philpott, [Blackwood Creek, TML], 1, [K^B]; 28/8/1901, Collins, [Stanley, TNW], 6, [K^B]; 28/8/1901, Barber, [Cranbrook, TEC], 1, [K^B]; 28/8/1901, Johns, [Mangana, TBL], 1, [K^B]; 4/9/1901, Sampson, [Springfield, TNE], 1, [K^B]; 4/9/1901, Newett, [Golconda, TNE], 1, [K^B]; 9/9/1901, White, [Bothwell, TCH], 1, [K^B]; 9/9/1901, Thornbury, [St. Marys, TEC], 1, [K^B]; 9/9/1901, Morley & Ridgeway, [Gordon River Bend, Nr Tyenna, TFW], 1, (Daily Telegraph, 10/9/1901, p.3 & Tasmanian News, 9/9/1901, p.2), [K]; 27/9/1901, Castle, [Swanport, TEC], 1, [K^B]; 27/9/1901, Clifford, [Triabunna, TEC], 3, [K^B]; 27/9/1901, Sampson, [Springfield, TNE], 1, [K^B]; 30/9/1901, ?, [St. Pauls, TEC], 1, (Mercury 30/9/1901, p.2), [K]; 9/10/1901, ?, [Avoca, TEC], 1, (Tasmanian News, 30/9/1901, p.3), [C]; 3/10/1901, Saward, [Burnie, TNW], 4, [K^B]; 3/10/1901, Collins, [Stanley, TNW], 2, [K^B]; 15/10/1901, Andrew, [Liena, TNW], 1, [K^B]; 5/11/1901, Collins, [Stanley, TNW], 1, [K^B]; 25/11/1901, Pearce, [Derwent Bridge, TCH], 1, [K^B]; 25/11/1901, Stannard, [Dee Bridge, TCH], 2, [K^B]; 2/12/1901, Pritchard, [Lady's Bay, TSW], 1, [K^B]; 2/12/1901, Philpott, [Blackwood Creek, TML], 2, [K^B]; 2/12/1901, Temple, [Dee Bridge, TCH], 1, [K^B]; 2/12/1901, Casswell, [Rosevale, TML], 1, [K^B]; 1901, ?, [Scottsdale, TNE], 4, (Examiner, 13/7/1901, p.7), [2C, 2K]; 1901, Mitchell, [Kamona, TNE], 1, (Letter to H. H. Scott, 22/7/1901, QVMAG Archives), [C]; 1901, Royal Commission Survey Party, [Collins Bonnet, TFW], 1, (Daily Telegraph, 27/2/1901, p.3), [S]; 1901, ?, [Mole Creek and Mt. Zeehan, TML], 1, (Zeehan and Dundas Herald, 5/4/1921, p.4), [K]; 11/1/1902, Philpott, [Blackwood Creek, TML], 1, [K^B]; 11/1/1902, Styles, [Ringarooma, TNE], 1, [K^B]; 20/1/1902, Jenkins, [Bronte, TCH], 3, [K^B]; 20/1/1902, Bennett, [Ross, TML], 1, [K^B]; 20/1/1902, Pearce, [Dee Bridge, TCH], 4, [K^B]; 20/1/1902, Kitchen, [Ouse, TEC], 1, [K^B]; 20/1/1902, McCoy, [Claude Road, TNW], 1, [K^B]; 20/1/1902, Cross, [Gladstone, TNE], 3, [K^B]; 20/1/1902, Young, [Barrington, TNW], 1, [K^B]; 10/3/1902, [Woolnorth, TNW], 1, (Guiler, 1985, pp. 99-101), [K]; 4/1902, Murray, [Springfield, TNE], 1, (Examiner, 8/4/1902, p.7), [S – attacked by thylacine]; 7/4/1902, Falkner, [Glengarry, TML], 1, [K^B]; 15/4/1902, How, [Mole Creek, TML], 1, [K^B]; 17/4/1902, Carn, [Lisdillon, TEC], 1, [K^B]; 24/4/1902, Stokell, [Jerusalem (now Colebrook), TEC], 1, [K^B]; 24/4/1902, Berwick, [Falmouth, TNE], 1, [K^B]; 15/5/1902, McGee, [Ross, TML], 1, [K^B]; 15/5/1902, Cooper, [Flowerdale, TNW], 1, [K^B]; 15/5/1902, Lee, [Smithton, TNW], 1, [K^B]; 22/5/1902, Rothwell, [Sisters Creek, TNW], 1, [K^B]; 22/5/1902, Ellis, [Dee Bridge, TCH], 1, [K^B]; 2/6/1902, Higgins, [Glenora, TEC], 1, [K^B]; 2/6/1902, Sheppard, [Halls Falls Track, TNE], 2, [K^B]; 2/6/1902, Rowllins, [Mathinna, TBL], 1, [K^B]; 2/6/1902, Spencer, [St. Marys, TEC], 3, [K^B]; 2/6/1902, Temple [Dee Bridge, TCH], 3, [K^B]; 10/6/1902, [Woolnorth (Studland Bay), TNW], 1, (Guiler, 1985, pp.99-101), [K]; 11/6/1902, Richardson, [Leipzig Bluff, TEC], 2, [K^B]; 11/6/1902, Rubenach, [Avoca, TEC], 1, [K^B]; 11/6/1902, Gamble, [Riverside, TML], 1, [K^B]; 11/6/1902, Tomlin, [Ellendale, TEC], 1, [K^B]; 11/6/1902, Harvey, [Port Cygnet, TEC], 1, [K^B]; 24/6/1902, Styles, [Ringarooma, TNE], 1, [K^B]; 24/6/1902, Tomlin, [Ellendale, TEC], 4, [K^B]; 24/6/1902, Wrigley, [Dee Bridge, TCH], 1, [K^B]; 24/6/1902, Shadwick, [Lisdillon, TEC], 1, [K^B]; 27/6/1902, [Woolnorth, TNW], 1, (Guiler, 1985, pp.99-101), [K]; 3/7/1902, Lee, [Smithton, TNW], 1, [K^B]; 21/7/1902, Badkin, [Bona Vista Estate, Avoca, TEC], 1, (Examiner, 24/7/1902, p.2), [C]; 23/7/1902, Ellis, [Dee Bridge, TCH], 1, [K^B]; 23/7/1902, Mullins, [Turners Marsh, TNE], 1, [K^B]; 23/7/1902, Gerke, [Ringarooma, TNE], 1, [K^B]; 23/7/1902, Newitt, [Golconda, TNE], 1, [K^B]; 23/7/1902, Quin, [Swansea, TEC], 1, [K^B]; 23/7/1902, Morgan, [Leguina, TBL], 1, [K^B]; 23/7/1902, Kitchen, [Ouse, TEC], 1, [K^B]; 25/7/1902, McGee, [Ross, TML], 2, [K^B]; 25/7/1902, Clifford, [Triabunna, TEC], 1, [K^B]; 25/7/1902, Allen, [Sisters Creek, TNW], 1, [K^B];

APPENDIX I

31/7/1902, Cashen, [Hollow Tree, TEC], 1, [K^B]; 31/7/1902, Ellis, [Dee Bridge, TCH], 1, [K^B]; 7/1902, Turner, [Cluan, TML], 4, (Sold by City Park Zoo, Launceston to National Zoo, Washington, D.C. - Arrived Washington 3/9/1902), [C]; 6/8/1902, Spencer, [St. Marys, TEC], 1, [K^B]; 6/8/1902, McGee, [Ross, TML], 1, [K^B]; 6/8/1902, Freeman, [Antill Ponds, TEC], 3, [K^B]; 27/8/1902, Hayes, [Parknook Hill, TML], 1, [K^B]; 27/8/1902, Sawford, [Stonehenge, TEC], 2, [K^B]; 27/8/1902, Nicholls, [Broadmarsh, TEC], 1, [K^B]; 27/8/1902, Allen, [Sisters Creek, TNW], 1, [K^B]; 27/8/1902, Hodge, [Hamilton, TEC], 1, [K^B]; 27/8/1902, McCallum, [Fentonbury, TEC], 1, [K^B]; 27/8/1902, Ling, [Bishopsbourne, TML], 1, [K^B]; 27/8/1902, Hall, [Goulds Country, TNE], 1, [K^B]; 2/9/1902, Redburn, [Ben Lomond, TBL], 1, [K^B]; 2/9/1902, Boyes, [St. Helens, TNE], 1, [K^B]; 11/9/1902, Brandon, [Ulverstone, TNW], 1, [K^B]; 11/9/1902, Price, [Longford, TML], 7, [K^B]; 11/9/1902, Williams, [Golconda, TNE], 1, [K^B]; 11/9/1902, Badham, [Nugent, TEC], 1, [K^B]; 11/9/1902, Philpott, [Blackwood Creek, TML], 2, [K^B]; 11/9/1902, Cornish, [Buckland, TEC], 2, [K^B]; 11/9/1902, ?, [Montagu River, TNW], 1, [K^B]; 11/9/1902, Allen, [Sisters Creek, TNW], 1, [K^B]; 20/9/1902, Bird, [Pipers River, TNE], 1, [K^B]; 20/9/1902, Ellis, [Dee Bridge, TCH], 3, [K^B]; 24/9/1902, Heron, [Ellendale, TEC], 1, [K^B]; 10/10/1902, Rosier, [Goshen, TNE], 1, [K^B]; 10/10/1902, Pearce, [Derwent Bridge, TCH], 7, [K^B]; 10/10/1902, Newitt, [Golconda, TNE], 1, [K^B]; 25/10/1902, Jenkins, [Bronte, TCH], 1, [K^B]; 14/11/1902, Sloane, [Lower Barrington, TNW], 1, [K^B]; 14/11/1902, Gale, [Duck River, TNW], 1, [K^B]; 25/11/1902, ?, [Paradise, TNW], 6, (Daily Telegraph, 25/11/1902, p.4), [C]; 27/11/1902, McCormack, [Deloraine, TML], 1, [K^B]; 2/12/1902, Williams, [Golconda, TNE], 1, [K^B]; 2/12/1902, Hawkins, [Cranbrook, TEC], 1, [K^B]; 15/12/1902, Crosby, [Middlesex Plains, TCH], 1, [K^B]; 15/12/1902, Cornish, [Buckland, TEC], 1, [K^B]; 31/12/1902, Forbes, [Deddington, TML], 3, [K^B]; 12/1902, Le Souef, [Meadstone, St. Paul's River, TEC], 1, (Paddle, 2000, p.58), [C – for Melbourne Zoo]; 7/2/1903, Cooper, [Holwell, TML], 1, [K^B]; 12/2/1903, Ellis, [Dee Bridge, TCH], 1, [K^B]; 20/2/1903, Williams, [Golconda, TNE], 1, [K^B]; 25/2/1903, Jenkins, [Bronte, TCH], 1, [K^B]; 6/3/1903, Parker, [Westbury, TML], 2, [K^B]; 24/3/1903, Barnes, [Fingal, TEC], 1, [K^B]; 30/3/1903, Gamble, [Riverside, TML], 1, [K^B]; 8/4/1903, Parker, [Westbury, TML], 1, [K^B]; 5/5/1903, Collins, [Stanley, TNW], 2, [K^B]; 5/5/1903, Young, [Barrington, TNW], 1, [K^B]; 5/5/1903, Barwick, [Ross, TML], 1, [K^B]; 14/5/1903, Frazer, [Chudleigh, TML], 3, [K^B]; 14/5/1903, Ridges, [Tunbridge, TML], 1, [K^B]; 21/5/1903, Parker, [Westbury, TML], 1, [K^B]; 2/6/1903, Falkiner, [Glengarry, TML], 2, [K^B]; 1904, Turner, [Cluan, TML], 1, (Examiner, 6/6/1904), [C]; 13/6/1903, Stannard, [Dee Bridge, TCH], 1, [K^B]; 13/6/1903, Pickett, [Eastern Marshes, TEC], 1, [K^B]; 13/6/1903, Fulford, [Waratah, TNW], 1, [K^B]; 23/6/1903, Clifford, [Triabunna, TEC], 1, [K^B]; 25/6/1903, Etchell, [Penguin, TNW], 1, [K^B]; 30/6/1903, Jackson, [Hamilton, TEC], 1, [K^B]; 13/7/1903, Franks, [Somerset, TNW], 1, [K^B]; 27/7/1903, Price, [Longford, TML], 1, [K^B]; 27/7/1903, Singline, [Ringarooma, TNE], 1, [K^B]; 30/7/1903, Spencer, [St. Marys, TEC], 1, [K^B]; 30/7/1903, Quin, [Lilydale, TNE], 1, [K^B]; 30/7/1903, Bresnehan, [Triabunna, TEC], 1, [K^B]; 4/8/1903, Bowden, [Myrtle Bank, TBL], 1, [K^B]; 6/8/1903, Morling, [St. Helens, TNE], 1, [K^B]; 6/8/1903, Allen, [Sisters Creek, TNW], 1, [K^B]; 7/8/1903, Ashton, [North Motton, TNW], 1, [K^B]; 13/8/1903, Brown, [Mountain River, TFV], 2, [K^B]; 21/8/1903, Hodge, [Hamilton, TEC], 2, [K^B]; 21/8/1903, Aylett, [Parkham, TML], 1, [K^B]; 3/9/1903, Atkinson, [Sheffield, TNW], 1, [K^B]; 15/9/1903, [Woolnorth, TNW], 2, (Guiler, 1985, pp.99-101), [K]; 16/9/1903, Philpott, [Blackwood Creek, TML], 3, [K^B]; 16/9/1903, Gill, [Swansea, TEC], 2, [K^B]; 30/9/1903, Brent, [Gladstone, TNE], 1, [K^B]; 30/9/1903, Prior, [St. Patricks River, TBL], 1, [K^B]; 9/10/1903, Kitchen, [Ouse, TEC], 1, [K^B]; 9/10/1903, Forbes, [Deddington, TML], 1, [K^B]; 9/10/1903, Stokell, [Jerusalem (now Colebrook), TEC], 1, [K^B]; 16/10/1903, Caswell, [Rosevale, TML], 2, [K^B]; 21/10/1903, Earley, [Great Lake, TCH], 1, [K^B]; 21/10/1903, Lane, [Victoria Valley, TCH], 3, [K^B]; 21/10/1903, Ellis, [Dee Bridge, TCH], 3, [K^B]; 6/11/1903, Squires, [Black Sugarloaf, TML], 1, [K^B]; 6/11/1903, Cander, [Ringarooma, TNE], 3, [K^B]; 11/11/1903, White, [Bothwell, TCH], 1, [K^B]; 17/11/1903, Collins, [Stanley, TNW], 4, [K^B]; 26/11/1903, Diprose, [Wynyard, TNW], 1, [K^B]; 3/12/1903, Clarke, [New Norfolk, TFV], 1, [K^B]; 3/12/1903, Condor, [Ringarooma, TNE], 1, [K^B]; 10/12/1903, Davies, [Mathinna, TBL], 3, [K^B]; 1903, Stevenson, [Upper Blessington (Aplico Farm), TBL], 8, (Maynard, D. & Gordon, T. 2014. Precious Little Remains, p.27 – Carriage Rug, QVM.2013.H.0023), [K]; 6/1/1904, Evans, [Falmouth, TNE], 1, [K^B]; 13/1/1904, Pearce, [Derwent Bridge, TCH], 6, [K^B]; 13/1/1904, Reynolds, [Dee Bridge, TCH], 1, [K^B]; 13/1/1904, Temple, [Dee Bridge, TCH], 4, [K^B]; 2/2/1904, Philpott, [Blackwood Creek, TML], 1, [K^B]; 11/2/1904, Davison, [Stanley, TNW], 1, [K^B]; 18/2/1904, Madson, [Bicheno, TEC], 1, [K^B]; 22/3/1904, Gamble, [Little Swanport, TEC], 2, [K^B]; 22/3/1904, McCarthy, [East Meander, TML], 4, [K^B]; 30/3/1904, Davison, [Stanley, TNW], 3, [K^B]; 30/3/1904, Scur, [Tunbridge, TML], 1, [K^B]; 30/3/1904, Prior, [St. Patricks River], TBL, 1, [K^B]; 23/4/1904, Groves, [Gladstone, TNE], 1, [K^B]; 27/4/1904, Hall, [Tunbridge, TML], 1, [K^B]; 11/5/1904, Conder, [Ringarooma, TNE], 1, [K^B]; 11/5/1904, Temple [Dee Bridge, TCH], 1, [K^B]; 11/5/1904, Alford, [Waratah, TNW], 1, [K^B]; 19/5/1904, Parker, [Westbury, TML], 1, [K^B]; 30/5/1904, Turner, [Cluan, TML], 1, (Examiner, 6/6/1904, p.4), [K]; 16/6/1904, Brown, [Koonya, TEC], 5, [K^B]; 16/6/1904, Williams, [Montagu River, TNW], 2, [K^B]; 16/6/1904, Redburn, [Ben Lomond, TBL], 1, [K^B]; 16/6/1904, Down, [Scottsdale, TNE], 1, [K^B]; 16/6/1904, Barnes, [Fingal, TEC], 1, [K^B]; 16/6/1904, Hayes, [Deloraine, TML], 2, [K^B]; 21/6/1904, White, [Bothwell, TCH], 1, [K^B]; 21/6/1904, Legro, [Fingal, TEC], 1, [K^B]; 21/6/1904, Harvey, [Port Cygnet, TEC], 1, [K^B]; 21/6/1904, Conder, [Ringarooma, TNE], 4, [K^B]; 24/6/1904, Johns [Ross, TML], 1, [K^B]; 24/6/1904, Sanson, [Black Bush, TEC], 1, [K^B]; 6/7/1904, Fagan, [New Norfolk, TFV], 1, [K^B]; 18/7/1904, Sampson, [Springfield, TNE], 1, [K^B]; 23/7/1904, Ellis, [Dee Bridge, TCH], 1, [K^B]; 23/7/1904, Hayes, [Deloraine, TML], 1, [K^B]; 23/7/1904, Barnes, [Fingal, TEC], 2, [K^B]; 3/8/1904, Doderly, [Longford, TML], 2, (AOT NS463/1/1, QVMAG Thylacine Reports, 6/8/1952), [1K^B, 1C – sold to Bart]; 3/8/1904, Parsons, [Gretna, TEC], 1, [K^B]; 3/8/1904, Casey, [Parkham, TML], 4, [K^B]; 5/8/1904, White, [Bothwell, TCH], 1, [K^B]; 5/8/1904, Leferve, [Georges River, TNE], 1, [K^B]; 5/8/1904, Shepherd, [Lebrina, TNE], 1, [K^B]; 10/8/1904, Johns, [Ross, TML], 1, [K^B]; 10/8/1904, Davey [Deddington, TML], 1, [K^B]; 15/8/1904, Badham, [Nugent, TEC], 1, [K^B]; 26/8/1904, Hedge, [Hamilton, TEC], 2, [K^B]; 1/9/1904, Temple, [Dee Bridge, TCH], 3, [K^B]; 1/9/1904, Cameron, [Ulverstone,

TNW], 1, [K^B]; 9/9/1904, Pickett, [Eastern Marshes, TEC], 1, [K^B]; 9/9/1904, Davey, [Deddington, TML], 1, [K^B]; 21/9/1904, Pearce, [Derwent Bridge, TCH], 3, [K^B]; 21/9/1904, Redburn, [Ben Lomond, TBL], 1, [K^B]; 21/9/1904, Kaye, [Deddington, TML], 1, [K^B]; 7/10/1904, Johnson, [Lilydale, TNE], 1, [K^B]; 7/10/1904, Conder, [Ringarooma, TNE], 3, [K^B]; 20/10/1904, Warde, [Waratah, TNW], 2, [K^B]; 10/11/1904, Scur, [Tunbridge, TML], 1, [K^B]; 10/11/1904, Gatenby, [Cressy, TML], 1, [K^B]; 10/11/1904, Temple, [Dee Bridge, TCH], 1, [K^B]; 1904, Purcell Bros, [Kamona, TNE], 1, (AOT NS463/1/1, QVMAG Thylacine Reports, 6/8/1952), [C – sold to Bart].

Period: 1905 – 1909

11/1/1905, Falkiner, [Glengarry, TML], 1, [K^B]; 20/1/1905, Philpott, [Blackwood Creek, TML], 3, [K^B]; 20/1/1905, Button, [Perth, TML], 1, [K^B]; 20/1/1905, Gamble, [Little Swanport, TEC], 1, [K^B]; 4/2/1905, Gray, [Lisdillon, TEC], 1, [K^B]; 24/2/1905, Daly, [Long Bay, TWC], 1, [K^B]; 27/2/1905, Stevenson, [White Hills, TML], 1, [K^B]; 22/3/1905, Wilkins, [Seymour, TEC], 1, [K^B]; 22/3/1905, Badham, [Nugent, TEC], 1, [K^B]; 24/3/1905, Dorloff /Brown, [Mainwaring Inlet, TSW], 1, [K – body found]; 13/4/1905, Towns, [Cressy, TML], 1, [K^B]; 13/4/1905, Shepherd, [Lebrina, TNE], 1, [K^B]; 13/4/1905, Bourke, [Karooola, TNE], 1, [K^B]; 2/5/1905, Legro, [Fingal, TEC], 1, [K^B]; 2/5/1905, Bourke, [Karooola, TNE], 1, [K^B]; 13/5/1905, Wagner [Woodsdale, TEC], 1, [K^B]; 24/5/1905, Parker, [Westbury, TML], 1, [K^B]; 31/5/1905, Groves, [Gladstone, TNE], 1, [K^B]; 31/5/1905, Groves, [Gladstone, TNE], 1, [K^B]; 31/5/1905, Bransden, [Perth, TML], 1, [K^B]; 6/1905, ?, [Oatlands, TEC], 1, (Examiner, 14/6/1905 p.3), [K]; 14/6/1905, Groves, [Gladstone, TNE], 1, [K^B]; 14/6/1905, Redburn, [Ben Lomond, TBL], 1, [K^B]; 14/6/1905, Burgess, [Cuprona, TNW], 2, [K^B]; 14/6/1905, Newett, [Golconda, TNE], 1, [K^B]; 14/6/1905, Young, [Barrington, TNW], 1, [K^B]; 14/6/1905, Badham, [Nugent, TEC], 1, [K^B]; 14/6/1905, Richardson, [Leipzig Bluff, TEC], 1, [K^B]; 14/6/1905, Shepherd, [Lebrina, TEC], 3, [K^B]; 21/6/1905, McAuliffe, [Tunnack, TEC], 1, [K^B]; 21/6/1905, Berwick, [Falmouth, TNE], 1, [K^B]; 21/6/1905, White, [Bothwell, TCH], 1, [K^B]; 6/1905, Cornish, [Mt. Douglas, TEC], 5, (Mercury, 13/6/1905, p.7), [K]; 1/7/1905, Gregson, [Buckland, TEC], 1, [K^B]; 1/7/1905, Cornish, [Buckland, TEC], 1, [K^B]; 1/7/1905, Quinn, [Lilydale, TNE], 1, [K^B]; 1/7/1905, Boyes, [St. Helens, TNE], 1, [K^B]; 1/7/1905, Duckett, [Leipzig Bluff, TEC], 1, [K^B]; 1/7/1905, Nicholas, [Hadsen, TML], 1, [K^B]; 1/7/1905, Nicholas, [Hadsen, TML], 1, [K^B]; 6/7/1905, Badhem, [Nugent, TEC], 1, [K^B]; 6/7/1905, Alford, [Waratah, TNW], 1, [K^B]; 14/7/1905, Linger, [East Meander, TML], 5, [K^B]; 25/7/1905, Casey, [Parkham, TML], 1, [K^B]; 25/7/1905, Newell, [Hastings, TSW], 1, [K^B]; 25/7/1905, Johns, [Mangana, TBL], 1, [K^B]; 25/7/1905, Johns, [Ross, TML], 1, [K^B]; 25/7/1905, Hughes, [Glen Huon, TSW], (Mercury, 29/7/1905, p.5), 1, [K]; 29/7/1905, Johns, [Ross, TML], 1, [K^B]; 3/8/1905, Price, [Nubeena, TEC], 1, [K^B]; 3/8/1905, Lefevre, [George River, TNE], 1, [K^B]; 9/8/1905, Radford, [Parkham, TML], 1, [K^B]; 9/8/1905, Duckett, [Leipzig Bluff, TEC], 3, [K^B]; 9/8/1905, Legro, [Fingal, TEC], 1, [K^B]; 9/8/1905, Gatenby, [Cressy, TML], 1, [K^B]; 16/8/1905, Harding, [Ross, TML], 1, [K^B]; 24/8/1905, Branch, [Bothwell, TCH], 1, [K^B]; 24/8/1905, Temple, [Dee Bridge, TCH], 3, [K^B]; 4/9/1905, Roberts, [Glen Huon, TSW], 1, [K^B]; 4/9/1905, Hall, [Goulds Country, TNE], 2, [K^B]; 11/9/1905, Bonney, [Deloraine, TML], 1, [K^B]; 11/9/1905, Williams, [Wilmot, TNW], 5, [K^B]; 11/9/1905, Williams, [Wilmot, TNW], 1, [K^B]; 11/9/1905, Nicholls, [Glenora, TEC], 1, [K^B]; 28/9/1905, Brown, [Koonya, TEC], 2, [K^B]; 28/9/1905, Radford, [Somerset, TNW], 2, [K^B]; 30/9/1905, [Woolnorth (Studland Bay), TNW], 1, (Guiler, 1985, pp.99-101), [K]; 5/10/1905, Conder, [Ringarooma, TNE], 1, [K^B]; 5/10/1905, Clarke, [New Norfolk, TFV], 1, [K^B]; 13/10/1905, Harman, [Sheffield, TNW], 1, [K^B]; 13/10/1905, Legro, [Fingal, TEC], 1, [K^B]; 14/11/1905, Freeburgh, [Nile, TML], 1, [K^B]; 14/11/1905, Davison, [Stanley, TNW], 5, [K^B]; 14/11/1905, [Scottsdale, TNE], 1, [K^B]; 22/11/1905, Pearce, [Derwent Bridge, TCH], 7, [K^B]; 22/11/1905, Cleasby, [Royal George, TEC], 2, [K^B]; 6/12/1905, Robinson, [Ringarooma, TNE], 1, [K^B]; 21/12/1905, Boyes, [St. Helens, TNE], 1, [K^B]; 5/1/1906, Philpott, [Blackwood Creek, TML], 1, [K^B]; 1/1906, Murray, [Mt Bischoff, TNW], 1, (Paddle 2000, p.83), [S]; 1/1906, Archer, [Den, Longford, TML], 1+, (Examiner, 8/1/1906, p.7), [S – thylacines known to frequent sheep run]; 9/3/1906, Berwick, [Falmouth, TNE], 1, [K^B]; 19/3/1906, Freeburgh, [Nile, TML], 1, [K^B]; 1906, H & A Ferguson, [Muddy Creek, TML], 1, (North West Advocate & Emu Bay Times 22/3/1906, p.2, [K], 28/3/1906, Collins, [Raminea, TSW], 4, [K^B]; 6/4/1906, Davies, [Mathinna, TBL], 1, [K^B]; 21/4/1906, Freeburgh, [Nile, TML], 1, [K^B]; 21/4/1906, Legro, [Fingal, TEC], 1, [K^B]; 27/4/1906, Goldsmith, [Oatlands, TEC], 1, [K^B]; 7/5/1906, Rubenach, [Avoca, TEC], 1, [K^B]; 7/5/1906, Jones, [Surges Bay, TSW], 1, [K^B]; 12/5/1906, Powell, [Tunbridge, TML], 1, [K^B]; 31/5/1906, Gray, [Lisdillon, TEC], 1, [K^B]; 31/5/1906, Medwin, [Black River, TNW], 1, [K^B]; 31/5/1906, Barwick, [Fingal, TEC], 1, [K^B]; 31/5/1906, Freeman, [Antill Ponds, TEC], 1, [K^B]; 8/6/1906, Phillips, [Blessington, TBL], 1, [K^B]; 8/6/1906, Davey, [Deddington, TML], 1, [K^B]; 21/6/1906, Collins, [Stanley, TNW], 1, [K^B]; 21/6/1906, Singline, [Ringarooma, TNE], 1, [K^B]; 21/6/1906, Harding, [Ross, TML], 1, [K^B]; 27/6/1906, Casey, [Parkham, TML], 1, [K^B]; 10/7/1906, Usler, [Westbury, TML], 1, [K^B]; 10/7/1906, Buckley [Castle Forbes Bay, TSW], 1, [K^B]; 10/7/1906, Tuck, [Blessington, TBL], 1, [K^B]; 10/8/1906, Tuck, [Blessington, TBL], 1, [K^B]; 10/8/1906, Redburn, [Ben Lomond, TBL], 1, [K^B]; 9/1906, Young, [Arthur track, TNW], 1, (The North Western Advocate and the Emu Bay Times, p.2), [K]; 1906, Stevenson, [Upper Blessington (Aplico Farm), TBL], 1, (Maynard, D. & Gordon, T. 2014. Precious Little Remains, p.70), [K]; 1906, Robinson, [New River, TNE], 3, (Laird Files, AOT NS1143/15 & Examiner, 4/8/1952), [K]; 1906, Robinson, [New River, TNE], 2, (Laird Files, AOT NS1143/15), [C]; 1/3/1907, Lowe, [Glenmark, TCH], 1, (Mercury, 25/3/1907, p.8), [C]; 7/1907, ?, [Fingal, TEC], 2, (Examiner, 11/7/1907, p.7), 1, [K]; 23/7/1907, Pratt, [Leipzig Bluff, TEC], 1, [K^B]; 9/7/1907, White, [Brookstead Estate, Nr. Fingal, TEC], 6, (Examiner, 9/7/1907, p.8), [K]; 8/1907, ?, [Den Hill, TEC], 1, (Examiner, 7/9/1907 p.8), [K]; 14/8/1907, Laskey, [New Norfolk, TFV], 1, [K^B]; 14/8/1907, Philpott, [Blackwood Creek, TML], 1, [K^B]; 21/8/1907, Freeman, [Antill Ponds, TEC], 1, [K^B]; 30/8/1907, Nichols, [Glenora, TEC], 4, [K^B]; 9/1907, Williams, [West Montagu, TNW], 1, (North Western Advocate and the Emu Bay Times, 9/9/1907 p.2), [K]; 5/9/1907, Pratt, [Leipzig Bluff, TEC], 1, [K^B]; 5/9/1907, Williams, [Wilmot, TNW], 1, [K^B]; 5/9/1907, Freeman,

APPENDIX I

[Antill Ponds, TEC], 1, [K^B]; 24/9/1907, Allen, [Cranbrook, TEC], 1, [K^B]; 24/9/1907, Triffitt, [Mikes Hill, TFV], 1, [K^B]; 25/9/1907, Phillips, [Blessington, TBL], 1, [K^B]; 10/1907, ?, [Pioneer, TNE], 4, (Bailey, C., *Derwent Valley Gazette*, 28/9/1994), [S]; 20/11/1907, Hutchings, [Recherche Bay, TSW], 2, [K^B]; 1907, ?, [The Den, Longford, TML], 1, (Examiner 7/9/1907, p.8), [K]; 22/2/1908, Newell, [Hastings, TSW], 1, [K^B]; 13/3/1908, Collins, [Stanley, TNW], 1, [K^B]; 30/4/1908, Phelan, [Strahan, TWC], 1, [K^B]; 30/4/1908, Barber, [Cranbrook, TEC], 1, [K^B]; 19/5/1908, Gale, [Duck River, TNW], 2, [K^B]; 3/6/1908, Green, [Blessington, TBL], 1, [K^B]; 24/6/1908, Doherty, [Strahan, TWC], 1, [K^B]; 7/1908, ?, [Ironcliff Rd., TNW], 1, (North Western Advocate and the Emu Bay Times, 8/7/1908, p.2), [S - multiple]; 4/7/1908, Boag, [Deloraine, TML], 1, [K^B]; 14/7/1908, Keogh, [Penguin, TNW], 1, (The North Western Advocate and the Emu Bay Times, 16/7/1908, p.2), [S]; 25/7/1908, Tripp, [Watery Plains Estate, White Hills, St. Leonards, TNE], 1, (Daily Telegraph, 13/7/1908, p.4), [K]; 25/7/1908, Davey, [Deddington, TML], 1, [K^B]; 25/7/1908, Marshall, [Bicheno, TEC], 1, [K^B]; 18/8/1908, Nichols, [Tyenna, TFV], 1, [K^B]; 10/1908, ?, [Dee, TCH], 1, (Mercury, 6/10/1908, p.4), [C - Sold to Beaumaris Zoo]; 1908, ?, [Dial Range, TNW], 1+, (The North West Post, 11/7/1908, p.2), [S]; 7/3/1909, Wainwright, [Woolnorth, TNW], 4, [C - Sold to Beaumaris Zoo]; 2/4/1909, Richardson, [Lake St. Clair, TCH], 1, (Skin presented to H. D. Baker for Smithsonian Collection - specimen USNM 154462, Mercury, 2/4/1909, p.4), [K]; 30/4/1909, Smith, [Montagu, TNW], 1, (Examiner, 4/5/1909, p.5), [K]; 6/1909, Perry, [Middlesex Plains, TCH], 1, (Examiner, 5/6/1909, p.6), [C]; 6/1909, McGowan, [North West (near Savage River), TWC], 4, [K]; 5/6/1909, Bryant, [Hamilton, TEC], 2, [K^B]; 1909, [Woolnorth, TNW], 6, (Paddle, 2012, p.77), [K].

Period: 1910 – 1919

3/1910, Britton, [Lowanna, TWC], 2, (Zeehan & Dundas Herald, 28/3/1910, p.2), [S]; 6/1910, Blackwood, [Fingal, TEC], 1, (Examiner, 21/6/1910, p.3), [C - Sold to Beaumaris Zoo]; 7/1910, McDonald, [Irishtown, TNW], 1, (North Western Advocate and the Emu Bay Times, 23/7/1910), [C - sold to Melbourne Zoo (Paddle, pers. com.)]; 1910, ?, [Pyengana, TNE], 3, (Graves, Walkabout, 1/5/1958, p.15-16), [C]; 1910, Stott, [Penguin, TNW], 1, (Advocate, 28/4/1936, p.9), [K]; 1910-1911, Slide, [Humboldt Divide, TFV], 1+, (Mercury, 18/2/1911, p.6), [S - numerous]; 6/6/1911, Bryant, [Spring Bay, TEC], 1, [C - Sold to Beaumaris Zoo (Dead on Arrival)]; 12/8/1911, Power, [Tyenna, TFV], 1, (Mercury, 14/8/1911, p.4), [C - Sold to Beaumaris Zoo]; 12/1911, Quarrell, [Fitzgerald, TFV], 1, [K]; 1911, ?, [Bermuda Road, TSW], 1, (Laird Files, AOT NS1143), [K]; 1911, Kidd, [Railton, TNW], 1, (AOT NS 896/21, Thylacine Competition Entry, Kidd, 26/8/81), [S]; 1911, Kidd, [Lime works dam, Railton, TNW], 1+, (AOT NS 896/21, Thylacine Competition Entry, Kidd, 26/8/81), [S]; 24/5/1912, Dilger, [Myrtle Grange, Nr. Mathinna, TNE], 1, (Examiner, 24/5/1912), [K]; 7/5/1912, Sidebottom, [Nr. Launceston, TML], 2, Sold to Beaumaris Zoo [C]; 1912, Bart, [Tonganah, TNE], 2, (Guiler, 1998, p.175), [C]; 1912, Mitchell, [Nook, TNW], 1+, (AOT NS 896/3, Thylacine Competition Entry, Mitchell), [S]; 1912, Knighton & Best, [Between Dip & Arthur Rivers, TNW], 1, (AOT AA613/1/148, Fauna Board Tasmanian Tiger Files, Gardner letter, 16/5/1964), [C - believed sold to Melbourne Zoo]; 8/1913, Turner, [Cluan, TML], 4, (Paddle, 2012), [C]; 1913, McArthur, [Mt. Balfour, TWC], 1, (AOT NS 896/1, Thylacine Competition Entry, McArthur R.), [S]; 1913, ?, [Ivy Glen, TML], 3, (Bailey, pers. com., 15/8/2014), [S]; 1913, Hanson, [Redpa, TNW], 1, [K]; 1913 (Summer), Jackson, [Rocky Cape, TNW], 1, (AOT NS 896/38, Thylacine Competition Entry, Jackson), [S]; 20/5/1914, Rowe, [Christmas Hills, TNW], 5, (AOT NS 463/1/1, QVMAG Thylacine Reports, Rowe, 25/11/1951 & Circular Head Chronicle, 20/5/1914, p.3), [3C - sold to Melbourne Zoo by J. Harrison, Ballarat Courier, 5/6/1914, p.4, 1K 1S]; 1914, French, [Tiger Hill, Sand River, Nr. Buckland, TEC], 1, (AOT NS 896/25, Thylacine Competition Entry, Ferrar), [C - sold to unknown person(s)]; 1914, Doherty, [Mainwaring River, TSW], 1, (Daily Telegraph, 16/10/1914, p.4), [K]; 1914, Slebin, [Hibbs River, TSW], 8+3, (AOT AA612/1/59, Tasmanian Animal & Birds Protection Board Papers, J. W. Slebin, letter 22/4/1937), [S]; 6-8/1915, Saward, [Marawah, TNW], 1, (Roberts's Diary & Saward, 1990), [C - sold to J. Harrison then to the Beaumaris Zoo, 23/10/1915]; 10/1915, Bourke, [Wynyard, TNW], 1, (North Western Advocate and the Emu Bay Times, 23/10/1915), [C - Sold to Beaumaris Zoo by J. Harrison]; 2/1916, Clark, [Browns River, TEC], 1, (Hobart Critic, 3/3/1916, p.2), [K]; 5/1916, Foy, [Top Cage (Arthur River), TNW], 1, (North Western Advocate and the Emu Bay Times, 13/5/1916), [C - Sold to Beaumaris Zoo by J. Harrison]; 17/6/1916, O'May, [Tyenna, TFV], 1, (Guiler, 1985), [C - Sold to Beaumaris Zoo]; 6/1916, Upston J., [Meunna, TNW], 1, (AOT NS 896/37, Thylacine Competition Entry, Doherty, 2/9/81), [C - sold to J. Harrison]; 10/1916, ?, [Brickmakers Settlement, Black River, TNW], 3, (Circular Head Chronicle, 11/10/1916, p. 2), [K]; 1916, Wainwright, [Woolnorth, TNW], 2, (Advocate Weekender, 8/8/1981, p.4), [C]; 3/1917, Saward, [West Montagu, TNW], 1, (North Western Advocate and the Emu Bay Times, 7/6/1917, p.4), [C - Sold to Beaumaris Zoo by J. Harrison, 30/6/17]; 6/3/1917, ?, [Elliott, TNW], 1, (Examiner, 6/3/1917, p.3), [C - Sold to Beaumaris Zoo by J. Harrison]; 7/1917, Cronin, [Mt. Cameron West, TNW], 1, (Queenslander, 1/7/1937, p.36), [K]; 1917, Mitchell, [Billycock Ranges, Nr. Kamona, TNE], 1, (AOT NS 463/1/1, QVMAG Thylacine Reports, Bart, 6/8/1952), [C - sold to City Park Zoo]; 1917, Diprose, [Tullawah, Nr. Wynyard, TNW], 1, (AOT NS 463/1/1, QVMAG Thylacine Reports, Bart, 6/8/1952), [C]; 1917, ?, [Tyenna, TFV], 1, (NHM Dublin, Specimens 1917.25.1 / 1917.25.2), [K]; 3/7/1918, Young, [Motherwell Farm, Forest, TNW], 3, (Circular Head Chronicle, 3/7/1918, p.2), [S]; 1919, Cowburn, [Brickmakers Settlement, Black River, TNW], 1, (AOT NS 896/20, Competition Entry, Cowburn, 30/8/1981), [S - thylacine killing wallaby]; 1919, ?, [Kelvedon Estate, TEC], 4, (Laird Files, AOT NS1143), [C]; 1919, ?, [Tullochgorum, TEC], 1, (H. W. Stewart's column - Bulletin newspaper, 11/11/1919), [K].

Period: 1920 – 1929

8/6/1920, Chapman, [St. Marys (Legge Estate), TEC], 1, (Examiner, 8/6/1920), [K]; 1920, Mc Gentry Brothers, [Spurs property, East Ridgley, TNW], 1, (AOT NS896/17, Thylacine Competition Entry, Crawford, 2/9/1981), [K]; 3/11/1921,

Abbott, [Russell Falls, TFW], 1, (Hobart Town Gazette, 3/11/1921), [K]; 1921, Doherty, [Arthur River, TNW], 1, (AOT NS896/37, Thylacine Competition files, Doherty, 2/9/81), [K]; 1921, Doherty, [Arthur River, TNW], 2, (AOT NS896/37, Thylacine Competition files, Doherty, 2/9/81), [Attempted live capture (2 pups)]; 1921, Penny, [Penny's Flats, TNW], 3, (AOT NS 896/36, Thylacine Competition Entry, Penny, 4/9/81), 1, [K], 2 [S]; 10/7/1922, Sullivan, [Barrington Road, Nr Melrose, TNW], 1, (Advocate, 13/7/1922, p.4), [S]; 1922, Eyles, [Mt. Balfour, TWC], 1+, (Fauna Board Records - AOT AA612/1/59, Launceston Police Station Report, 8/5/1928), [S - (several thylacines known to be in the area)]; 1922, Eyles, [Pieman River, TNW], 1+, (Fauna Board Records - AOT AA612/1/59, Launceston Police Station Report, 8/5/1928), [S]; 1922, Wainwright H., [South of Arthur River, TWC], 1, (Malley & Brown Interview, 1/10/1972 & Paddle, 2000, p.64), [C - sold to J. Harrison]; 1922, Butterworth, [Runnymede, TEC], (Wildlife, July 1946, Vol. 8, (7), p.247), [K]; 1922-23, O'Shea, [Blackwood Creek, TML], 1, (Bailey, pers. com.), [S]; 7/1922-23, Frankcombe, [Blackwood Creek, Nr Poatina, TML], 1, (AOT NS 896/33, Thylacine Competition Entry, O'Shea (Frankcombe), 25/8/1981), [S]; 6/1923, ?, [Tyenna, TFW], 1, (Mercury, 20/6/1923, p.5), [C - sold to Beaumaris Zoo]; 7/1923, Loveluck & Salter, [Adamsfield, TWC], 1, (Recollection by Loveluck's daughter, Mrs. Phyllis Blundell, 1997), [C - sold to Beaumaris Zoo, Mercury, 7/7/1923, p.6]; 9/1923, Mullins, [Tyenna Valley, TFW], 4, (Mercury, 12/2/1924, p.6), [C - sold to Beaumaris Zoo]; 1923, Churchill, [Mt. Field West, TFW], 4, (female and pups), (AOT NS896/4, Thylacine Competition files, Jenkins, 2/9/1981), [C - sold to Beaumaris Zoo]; 1923, Mullins, [West Coast, TWC], 4, (Examiner, 18/1/1924, p.4), [C]; 3/1924, ?, [Arthur / Pieman Rivers, TNW], 2, (Advocate, 8/3/1924, p.11), [C - sold to City Park Zoo, Launceston]; 24/8/1924, ?, [Woolnorth, TNW], 1, (Paddle, 2012, p.77), [C]; 1924, Churchill, [Saw Back Range, TWC], 2, (Bailey, pers. com.), [S]; 1924, Churchill, [Styx River, TFW], 1, (Bailey, pers. com.), [S]; 1924, Churchill & Fisher, [Mt. Wright, TWC], 1, (Bailey, pers. com.), [S - in chase after wallaby]; 1924, Scott, [Deloraine, TML], 1, (Bailey, pers. com.), [K]; 13/6/1925, Murray, [Waratah, TNW], 3, (Mercury, 13/6/1925, p.8), [C - 2 died post capture - survivor kept as pet and then sold to Beaumaris Zoo]; 7/1925, ?, [Woolnorth, TNW], 2, (Paddle, 2012, p.77), [C]; 10/1925, ?, [Woolnorth, TNW], 1, (Paddle, 2012, p.77), [C]; 1925, Farrer, [Mt. Mueller, TFW], 2, (Bailey, pers. com.), [C]; 1925, Wainwright & Gardner, [Coastal area of Arthur River, TNW], 1, (AOT AA613/1/148, Fauna Board Tasmanian Tiger Files, Gardner letter, 16/5/1964), [K]; 1925, ?, [Trowutta, TNW], 1, (Hunterian Museum, Glasgow, Specimen Z1358, presented by T. Flynn), [K]; 1925-26, Stacey, [Adamsfield, TWC], 1, (AOT NS896/2, Thylacine Competition files, Dransfield, 25/8/1981 & AOT NS1143/1/17, QVMAG Thylacine Reports, Shea Correspondence Files, Stacey), [S]; 4/8/1926, Forward/Harman, [Salmon River (Toomey's lease), TNW], 2, (Circular Head Chronicle, 11/8/1926, p.5), [1K - sold to J. Harrison, 1C - escaped from snare]; 8/1926, Clarke, [Salmon River, TNW], 1+, (Advocate, 21/8/1926, p. 4), [S]; 29/9/1926, Forward, [Salmon River, TNW], 1, (Circular Head Chronicle, 29/9/1926, p.5), [C - attempted]; 1926, Harrison, [Arthur River, TNW], 1, (Advocate, 2/7/1927, p.2), [S]; 1926, Kenevan, [Arthur River, Nr. Trowutta, TNW], 1, (AOT AA613/1/148, Fauna Board Tasmanian Tiger Files, Kenevan letter, 30/10/1956), [C - broke free of snare]; 1926, Carter, [Vale of Belvoir, TNW], 2, [C]; 1926-27, Hartnett, [No locality, but probably in the Lake St Clair area, TCH - Col Bailey pers. com.], 1, (AOT NS 463/1/1, Bond, Paddy Hartnett sold specimen to Tasmanian Museum for £10), [K - dead in snare]; 25/5/1927, Churchill, [Adamsfield, TWC], 1, (Mercury, 25/5/1927, p.10), [C]; 25/5/1927, Churchill, [Adamsfield, TWC], 1, (Mercury, 25/5/1927, p.10), [S*]; 13/7/1927, Willoughby, [Smithton, TNW], 1, (Circular Head Chronicle, 13/7/1927, p.3), [C - died shortly after due to injuries inflicted by dogs]; 7/1927, ?, [Elliott - Waratah Rd, West Oonah, TNW], 2, (Daily Telegraph, 15/7/1927, p.6., [K]; 1927, Bayley, [Lagoon / Interview Rivers, TWC], 1, (AOT NS896/18, Competition Entry, Bayley, 22/8/1981), [C - escaped from snare]; 1927, Baptista, [Lagoon River, TWC], 4, (AOT NS 896/18, Competition Entry, Bayley, 22/8/1981), [S]; 1927-28, Home, [Trowutta, TNW], 3, (Laird Files, AOT NS 1143), [C]; 1927, Mayher, [Lake Hanson, North Cradle Mtn., TCH], 2, (Mercury, 8/6/1946, p.21), [S - mother & pup]; 1927, Horne, [Hellyer Gorge on route to Waratah, TNW], 2, (AOT NS 1143/1/19, Laird Files, Interview with Jack Horne, 26/9/1961), [S]; 1/1928, Clarke, [Trowutta, TNW], 3, [C - sold to Beaumaris Zoo]; 24/1/1928, Hunt, [Tyenna, TFW], 1, [C - sold to Beaumaris Zoo]; 3/1928, Chester & Hope, [Arthur River, TNW], 1, (Advocate, 20/3/1928 & J. Harrison's notebook), [C - sold to Sir Colin MacKenzie (Melbourne Zoo) by J. Harrison]; 12/4/1928, Splits Exploration, [Gordon River, TWC], 1, (Mercury, 12/4/1928, p.5), [S* - tracks identified]; 17/4/1928, Reid, [Port Davey, TSW], 2, (Moeller files), [C - sold to Beaumaris Zoo]; 11/1928, ?, [Port Huon (Blue Gum Hill), TSW], 1, (Huon Times, 23/11/1928, p.5), [S]; 1928, Porteus, [Trowutta, TNW], 1, (Laird Files, AOT NS 1143), [K]; 4/1929, Bell, [Adamsfield, TWC], 1, (AOT NS 896/32, Thylacine Competition Entry, Bell, 7/9/1981), [S]; 6/1929, Jordon, [West Takone, TNW], 1, (Advocate, 15/2/1986, p.160 & Paddle 2000, p.39), [C - Sold to Melbourne Zoo by J. Harrison]; 6/1929, Jordon, [West Takone, TNW], 4, (Advocate, 15/2/1986, p.16 & Paddle 2000, p.39), [K]; 1929, ?, [Wylds Craig, TFW], 1+, (AOT NS896/4, Thylacine Competition files, Jenkins, 2/9/1981), [S]; 1929, Crawford, [Rosebery, TWC], 1, (AOT NS 896/17, Thylacine Competition Entry, Crawford, 2/9/1981), [S - multiple of same animal]; 1920's, Milton, [Milabena, TNW], 1, (Guiler & Godard, 1998, p.157), [C - Sold to Harrison]; 1920s, ?, [Ingilis River, TNW], 1, (Col Bailey - Derwent Valley Gazette, 26/6/1996), [S* - Vocalisations heard]; 1920s, ?, [Salmon River, TNW], 1, (Mercury, 24/8/1954), [C].

Period: 1930 – 1939

4/1930, Smyth, [Newhaven Track, TNW], 5, (Advocate, 10/4/1930, p.4), [S* Tracks of female and young]; 6/5/1930, Batty, [Mawbanna, TNW], 1, (Examiner, 1/5/2005), [K - Body sold to James Harrison]; 28/5/1930, ?, [Mawbanna, Newhaven Track, TNW], 1, (Circular Head Chronicle, 28/5/1930, p.1), [C]; 7/7/1930, Delphin Bros, [Mt. Bischoff, TNW], 1, (Advocate, 10/7/1930, p.6), [C - Displayed as a fair ground attraction]; 10/1930, Delphin Bros, [Waratah, TNW], 1, (Advocate, 11/8/1930, p.6 & Mercury, 17/10/1930, p.8), [C - sold to Beaumaris Zoo (Domain), Mercury, 17/10/1930, p.8];

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10/1930, Delphin Bros, [Waratah, TNW], 1, (Mercury, 17/10/1930, p.8), [C – died from wounds]; 10/1930, Horn, [Hellyer Gorge, TNW], 2, (Examiner, 3/11/1930, p.5), [S]; 1930, Collins, [Mt. Direction, TNE], 1, (AOT NS 896/27, Thylacine Competition Entry, Collins, 21/8/1981, [S - group sighting of thylacine killing a rabbit]; 1930, Lawes, [Mt. Stronach, TNE], 1, (AOT NS 896/29, Thylacine Competition Entry, Lawes, 10/9/81), [S]; 1930, Willoughby, [Arthur River (Arthur River Mill), TNW], 1, (Precious Little Remains, p.90), [C – lived for 2 days following capture after fight with dog, body sold to James Harrison]; 1930, Wilson, [Pieman River, TWC], 1, (NMA Collection, Skin specimen: 1991.0016.0001), [K]; 1930, ?, [Traveller Range, TCH], 1, (Queen Victoria Museum Files), [K]; 15/1/1931, Foster, [Mersey Valley, Lovetts Flats, TNW], 1, (Advocate, 16/1/1931, p.4), [S]; 5/9/1931, Dutton, James, Fawcner, [“Big Bend” of the Mersey River, TNW], 1, (Advocate, 8/9/1931, p.4), [S – Encounter with dogs]; 14/11/1931, Butler, [Mawbanna, TNW], 1+, (Examiner, 22/8/1934, p.3), [S* - Sgt. Butler reported vocalisations]; 1931+, Kaine, [Lapoinya, TNW], 1, (Sleightholme interview, 9/2013), [C - sold to Beaumaris Zoo (Domain)]; 1931, Lovelock, [Port Davey Track, TSW], 1, (Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Hobart Police Station Report, Boyd, 13/8/1937), [S* – tracks]; 1931, Bell, [Russell River, TFV], 1, (AOT NS 896/32, Thylacine Competition Entry, Bell, 7/9/1981), [S]; 1931, Murray & Rist, [Hellyer Gorge, TNW], 1, (Rist's son's recollection, 27/4/2006), [C]; 1931, Trigg, [Lake Meston, TCH], 1, (Col Bailey - Derwent Valley Gazette, 25/5/94), [C – later released]; 1931, Kaine, [Sisters Creek, TNW], 1, (Sleightholme interview, 9/2013), [K]; 1931, ?, [Nabageena, TNW], 1, (Circular Head Chronicle, 7/10/1931, p.3 & Advocate, 7/10/1931, p.6), [S]; 1931, Harrison, [Junction of Arthur & Hellyer Rivers, TNW], 1, (AOT NS1143/1/17, QVMAG Thylacine Reports, Blackwell, 27/11/1951), [C]; 1931-32, Frankcombe, [Blackwood Creek, Nr Poatina, TML], 2, (AOT NS 896/33, Thylacine Competition Entry, O'Shea (Frankcombe), 25/8/1981), [S]; 30/11/1932, J & G Wills, [Alcomie, TNW], 1, (Circular Head Chronicle, 30/11/1932, p.2), [S]; 12/1932, ?, [Woodstock, TEC], 1, (Huon Times, 22/12/1932, p.2), [S - multiple]; 1932, Collins, [Nelsons River, Collingwood Valley, TWC], 1, (AOT NS 463/1/1, QVMAG Thylacine Reports, Collins, 6/8/1952) [S* – tracks]; 1932, Clark (son of), [Adamsfield, TWC], 1, (AOT NS 463/1/1, QVMAG Thylacine Reports, Clark, 4/1/1952), [S]; 1932, Williams, [Cape Sorrell lighthouse, TSW], 1, (AOT NS 896/28, Thylacine Competition Entry, Williams), [S – group sighting of thylacine chasing goats]; 1932, Butler, [Lake St. Clair, TCH], 1, (Mercury, 10/2/1937, p.12), [S]; 1932, Butler, [Iron Store, Old West Coast Hobart Track, TWC], 1, (Mercury, 10/2/1937, p.12), [S]; 30/5/1933, Summers, [Rocky & Interview Rivers, TNW], 2, (Tasmanian tiger files, AOT AA612/1/59, Wynyard Police Report, 3/4/1937, p.2), [S* – tracks mother and cub]; 1933, Bond, [Boyes / Pokanna Rivers, TWC], 1, (AOT NS 463/1/1, QVMAG Thylacine Reports, Mollison, 25/11/1951), [K]; 1933, Bond, [Rasselas Valley, TFV], 1, (Laird files, AOT NS 1143), [K]; 1933, Churchill, [Florentine, TFV], 1, [C – Sold to Beaumaris Zoo (Domain)]; 1933, Martin, [Port Davey Track, TSW], 1, (AOT NS 463/1/1, QVMAG Thylacine Reports, 2/12/1952), [S* - Thylacine kangaroo kill]; 1933, Sargent, [Wynyard (Wynyard beach), TNW], 1, (Precious Little Remains, p.91), [K – Dead specimen washed up onto beach]; 1933, Harrison, [Parrawe, TNW], 1, (AOT NS1143/1/17, QVMAG Thylacine Reports, Blackwell, 27/11/1951), [C - sold to Sir Colin Mackenzie (Melbourne Zoo)]; 1934, Smith, [Spero River, TSW], 2, (Guiler, 1998, p.128), [S]; 1934-35, Gaffney, [Pieman River, TWC], 2, (Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Trooper Long Police Report, 22/8/1937), [S]; 3/1935, Cole, [King William Range, TSW], 1, (Mercury, 13/3/1935, p.5), [S]; 1934-35, Woods, [Ringarooma, TNE], 1, (Guiler & Godard, 1998, p.148), [S]; 10/1935, Tepper, [Dempster Plains, TNW], 4, (Moeller files – Notes from 1966 Guiler interview), [C – female with three pouch pups – killed by dog after 2 days confinement]; 27/11/1935, Williams, [Montagu, TNW], 1, (Circular Head Chronicle, 27/11/1935, p.2), [S*]; 1935, ?, [Dunns Plain, TNW], 4-5, (Mercury 6/5/1937, p.8), [S* - Vocalisations -Bushman heard 4 or 5 Tigers calling]; 1935, Delphin, [Mt. Arrowsmith, TWC], 8, (Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Bothwell Police Report, Button, 9/4/1937), [S]; 1935, Farrow, [Mt. Wedge, TSW], 1+, (Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Hobart Police Station Report, Boyd, 13/8/1937), [S]; 1935-36, Peck, [Mt. Barrow, TBL], 2, (AOT NS 463/1/1, QVMAG Thylacine Reports, Peck, 8/8/1952), [S]; 1935-40, Mollison, [Brickmakers Bay, TNW], 1, (AOT NS 463/1/1, QVMAG Thylacine Reports, 25/11/1951), [S]; 1/1936, ?, [Dolly River (Lileah district), TNW], 1, (Advocate, 21/4/1937, p.7), [S]; (Jul/Aug) / 1936, Williams & Reynolds, [Collingwood River, TWC], 1, (Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Fleming Police report, Bothwell Station, 3/4/1937, pp.1-2 & Examiner, 12/4/1937, p.3), [S]; 9/1936, Delphin, [Surprise Valley, TWC], 1, (Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Fleming Police report, Bothwell Station, 3/4/1937, p.1.), [S]; 12/1936, ?, [Lake St. Clair, TCH], 1, (Mercury, 18/1/1936, p.5), [S* - tracks & wallaby kill]; 12/1936, Marthick, [Dolly River, Lileah, TNW], 3, (Mercury, 17/2/1937, p.5 & Fauna Board Records - AOT AA612/1/59, Wynyard Police Report, 3/4/1937), [S*]; 12/1936, Marthick, [Rogerton, TNW], 1, (Mercury, 17/2/1937, p.5 & Fauna Board Records - AOT AA612/1/59, Wynyard Police Report, 3/4/1937 & Burnie Police Report, 5/3/1937), [S]; 1936, Thorp, [Marrawah, TNW], 1, (AOT NS463/1/1, QVMAG Thylacine Reports, 26/11/1951), [S]; 1936, PAX, [Black River (east of Alcomie), TNW], 1, (Mercury, 6/5/1937, p.8), [S]; 1936, ?, [Traveller River, TCH], 1, (AOT NS463/1/1, QVMAG Thylacine Reports, Dixon), [C – suffocated]; 1936, Williams, [Cardigan & Collingwood Rivers, TWC], 1+, (Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Williams letter dated 13/2/1937), [S]; 1936, Williams, [Tiger Hill (Franklin River), TWC], 2, (Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Williams letter dated 13/2/1937), [S]; 1936, Britton, [Lileah, TNW], 1, (AOT NS 463/1/1, QVMAG Thylacine Reports, Britton, 26/11/1951), [S – tiger allegedly attacked school child on horse]; 1936, ?, [Tarraleah, TCH], 1, (Mercury, 10/2/1937, p.12, Dr J. Pearson comment), [C?]; (Jan / Feb) / 1937, Davis, [Port Davey, TSW], 1, (AOT AA612/1/59, Tasmanian tiger files, RZSNSW Bassett Hull letter, 2/3/1937), [S* - vocalisations]; 2/1937, Bell, [Lofty Ranges, Nr Corinna, TWC], 1+, (AOT AA612/1/59, Tasmanian tiger files, M. A. Summers police report, Wynyard station, 14/5/1937, p.3), [S]; 2/1937, Daly, [Jane River, TWC], 1, (Examiner, 19/2/1937, p.10 - J. A. Daly interview), [S* -tracks]; 11/3/1937, ?, [Mt. Bischoff (Mt. Bischoff Mine), TNW], 1, (Advocate, 21/4/1937, p.7), [S]; 26/4/1937, Gonion, [Waratah,

TNW], 1, (AOT AA612/1/59, Tasmanian tiger files, M. A. Summers police report, Wynyard station, 14/5/1937, p.3), [S]; 4/1937, ?, [Engineer Range, TWC], 1, (Fauna Board Report - Sightings - Examiner, 21/4/1937, p.3), [S]; 4/1937, ?, [Eldon Peak, TCH], 1, (Fauna Board Report - Sightings - Examiner, 21/4/1937, p.3), [S]; 7/1937, Pearce, [Tarraleah district (Guelph River), TCH], 1+, (Mercury, 19/8/1937, p.11 & Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Bothwell station report, Fleming, 20/8/1937), [S & S* -tracks]; 1937, Smith Bros., [Arthur River, TWC], 1+, (AOT AA612/1/59, Tasmanian tiger files, M. A. Summers police report, Wynyard station, 14/5/1937, p.3), [S* - vocalisations and tracks]; 1937, ?, [Sandy Cape, TWC], 1+, (Fauna Board Records - AOT AA612/1/59, Trooper Long Police Report, 22/8/1937), [S - lair]; 1937, PAX, [Duck Bay, TNW], 1+, (Circular Head Chronicle, 6/10/1937, p.3), [S]; 1937, Davey, [Middletons Creek Gold Mine (N.W. of Corinna), TWC], 2, (Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Davey letter, 14/4/1937), [S]; 1937, Evans & Oates, [Dee River, TCH], 1, (Fauna Board Records - AOT AA612/1/59, Hobart Police Station Report, 18/8/1937), [S - described as a wanderer and isolated sighting]; 1937, Pearce, [Mt. Hobhouse, TCH], 1, (Mercury, 19/8/1937, p.11), [S* - tracks]; 1937, Banks, [Arthur River, TWC], 1, (Fauna Board Records - AOT AA612/1/59, Trooper Long Police Report, 22/8/1937), [K]; 1937, Haywood, [Big Creek / Dip River, TNW], 4, (Walkabout, 1/4/1958, pp.15-16 & Wildlife, Aug 1946, Vol. 8, (8), p.288), [S]; 1937, Anderson, [Mt. Bischoff Mine Dam, TNW], 1, (Fauna Board Records, AOT AA612/1/59, Wynyard Police Report, 3/4/1937), [S]; 1937, Farrow, [Jubilee Range, TFW], 2, (Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Hobart Police Station Report, Boyd, 13/8/1937), [C1 - broke free of snare, S1]; 1937, ?, [Franklin River, TWC], 1, (Fauna Board Report - Sightings - Examiner, 21/4/1937, p.3), [S]; 1937, ?, [Kelly Basin (Macquarie Harbour), TWC], 1, (Fauna Board Report - Sighting - Mercury, 21/8/1937, p.13), [S]; 1937, ?, [Raglan Range, TWC], 1, (Fauna Board Report - Sightings - Examiner, 21/4/1937, p.3), [S]; 1937, Cooper, [Spero River, TSW], 1+, (Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Cooper letter, 25/9/1937), [S]; 1937, Charles, [Mawbanna, TNW], 1, (AOT AA613/1/148, Fauna Board Tasmanian Tiger Files, Charles letter, 22/8/1965), [S]; 9/1938, ?, [Rufus Track, TCH], 1, (Mercury, 21/9/1938, p.13), [S* - tracks]; 1938, ?, [Arve Valley (Fourfoot Plain), TSW], 1, (Mercury 4/11/1938, p.10), [S* - Tiger spoor identified along logging tracks]; 1938-40, Smyth, [Irishtown, TNW], 2, (AOT NS 463/1/3, QVMAG Thylacine Research - Correspondence, 9/2/1952), [S]; 4/1939, Stuttard & Nunn (?*), [Arthur River (Temma side), TNW], 2, (Fauna Board Tasmanian Tiger Files, AOT AA612/1/59, Police Report, Burnie Station, 9/5/1939), [S]; 24/5/1939, Jones, [Scopus, TNW], 1, (Circular Head Chronicle, 24/5/1939, p.2), [S]; 1939, Stacey, [Wedge River, TSW], 1, (AOT NS 463/1/1, QVMAG Thylacine Reports, Stacey, ?/11/1952), [S]; 1939, Chisholm, [Arthur & Salmon Rivers, TNW], 1+, (AOT AA612/1/59, Fauna Board Records, Police Report, Hobart Station, Stewart, 22/5/1939), [S - multiple]; 1930s, Batiste, [Adamsfield, TWC], 1, (AOT NS 896/5, Thylacine Competition Entry, Aschman, 1/9/81), [S - thylacine in pursuit of a wallaby]. AOT = *Tasmanian Archive and Heritage Office (TAHO)*.